

Handpoint*

Integrated Hi5 Card Reader User Guide



Hi5 card reader User Guide

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1. QUICK GETTING STARTED GUIDE

This guide will help you get to know your Hi5 card reader and make your first transaction as an integrated payment terminal.

1.1. WHAT'S IN THE BOX?

When you receive the box, check if the Handpoint seal is still intact. It should show you if someone has opened the box before you. Inside the box you should find your Hi5 card reader and a USB mini-B connector.



1.2. GETTING TO KNOW YOUR HI5 CARD READER

Here is your Hi5 card reader from all angles. The table below describes what you see.



#	Name	Description
1	Printer paper slot	Receipts print out from here. The printer paper should be inserted with the paper sticking out of this slot before use.
2	Clock	Shows the time - hours : minutes : seconds
3	Charging port	The round port is for battery charging, using the included charger





4	USB port	The USB cable used for this port is for device programming and debugging so not relevant for live card transactions
5	Up/down arrows	Move up and down the menus, then select by pressing the OK button (see n. 10)
6	Cancel button	To cancel transactions when applicable, or other actions
7	NFC Status Lights	These lights indicate the status of a contactless transaction
8	EMV chip reader	Insert card with the chip into the slot (facing up)
9	Back button	To erase keyed numbers
10	OK button	To select or confirm actions
11	Power button	To turn on and off, hold button down for a couple of seconds and follow commands
12	Magnetic stripe reader	Swipe card with the magnetic stripe facing left
13	Icons	Here on the screen are icons which show battery life and Bluetooth connection
14	Device Label	This label provides you with important information about your card reader such as its serial number (SN) and hardware version (HW ver)
15	SIM card cover*	Remove this cover and you will find the slot to insert your SIM card.*

* This is only for standalone Hi5 card readers so isn't needed for integrated solutions

1.3. GET STARTED

The first time you connect, you have to register the Hi5 card reader to the point of sale application. Please follow the instructions in your POS app to connect and register. Each version of the POS app does this differently.

The first transaction:

1. Make sure that the smartphone, computer or tablet you're using with the Hi5 card reader has Bluetooth turned on
2. Turn on the Hi5 card reader by pressing and holding  [Power button] for a couple of seconds
3. Pair the Hi5 card reader to the Bluetooth device
4. Follow the instructions on your POS app to register the Hi5 card reader
5. Wait until you see the Bluetooth icon (📶) on the Hi5 card reader screen (see #13 in section 1.2). When that icon appears, the Hi5 card reader is connected. This may take a few seconds
6. Initiate a transaction in the POS app on the smartphone, computer or tablet
7. When the message "UPDATING READER" appears, the Hi5 card reader will start downloading and installing the update. When the Hi5 card reader has finished, the message "UPDATE COMPLETE" will appear
8. When the message "INSERT CARD" is displayed, insert the card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
9. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake), or cancel by pressing  [Cancel button]
10. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The POS app is responsible for providing the customer with the receipt created by the Hi5 card reader.

1.4. HOW IT WORKS

This section shall demonstrate a short version of how the Handpoint solution technically works.



1. The mPOS/POS app downloaded on your device initiates a transaction on the Hi5 card reader using Bluetooth
2. Customer inserts card and follows the directions on the Hi5 card reader screen
3. The Hi5 card reader sends the transaction information encrypted via Bluetooth to the POS app
4. The POS app forwards the encrypted transaction information to the Handpoint gateway via an internet connection which processes the transaction using your acquirer

5. The Handpoint gateway receives a response from the acquirer and forwards the encrypted response to its internet connection
6. The POS app forwards the encrypted response to the Hi5 card reader via Bluetooth
7. The Hi5 card reader reads the response, finalises the transaction and sends a receipt to the POS app
8. Customer removes card and the merchant retrieves the receipts from the Hi5 card reader (keeping the first printed receipt which is the merchant copy and handing over the second printed receipt which is the merchant copy) and provides the customer the sale receipt through the POS app

2. HI5 CARD READER SPECIFICATIONS

Below are the technical specifications of the Hi5 card reader and information about the software and configurations.

2.1. HARDWARE TECHNICAL SPECIFICATION

<i>Display</i>	320 x 240 px TFT Color LCD
<i>Card readers</i>	Landing type smart card reader, triple track bi-directional magnetic card reader
<i>Battery</i>	Rechargeable Li-ion 7.4V, 1300 mAh
<i>Connectivity</i>	Bluetooth 3.0 Class 2
<i>Certifications</i>	CE, FCC, PCI PTS 3.x, EMV Level 1 Contact, EMV Level 2 Contact, EMV Level 1 Contactless, VISA payWave, MasterCard Contactless, American Express Expresspay, Discover Zip, Apple® MFi
<i>Dimensions (LxWxH), mm</i>	172 x 76 x 49
<i>Weight, g</i>	320
<i>Operational temperature range</i>	-10 °C to +40 °C / 5 to 90% RH
<i>Storage temperature range</i>	-15 °C to +50 °C / 5 to 90% RH
<i>Power Supply</i>	9V through power supply

2.2. TERMINAL SOFTWARE AND CONFIGURATIONS

Handpoint develops the terminal software as well as the terminal configurations. The terminal software communicates with your POS app (Point of Sale application) using Bluetooth.

The configuration is specific to each merchant and cannot be seen or modified by you. The configurations are created by the Handpoint system and remotely pushed to your Hi5 card reader.

In the case of a critical update, Handpoint can automatically and remotely push the latest software or configuration version onto your Hi5 card reader.

Section 3.4 shows you how to find which software and configuration versions your Hi5 card reader has.

2.3. SECURITY

All card information is encrypted using Triple Data Encryption Algorithm (3DES) with a Derived Unique Key Per Transaction (DUKPT) key management process. Each transaction is encrypted

with 3DES using a unique key per transaction before being sent to the Handpoint gateway. The Handpoint's terminal software is certified as PCI Point-to-Point Encryption (P2PE) compliant.

For security reasons, it is essential that during a transaction the merchant and all employees must not request a cardholder to divulge their PIN nor accept the PIN from the cardholder in an oral or written manner.

3. HI5 CARD READER USER GUIDE


Here are further instructions how to use the different functions of your Hi5 card reader.

3.1. CONNECTING YOUR HI5 CARD READER

To be able to take payments your Hi5 card reader needs to be connected via Bluetooth to a smartphone, computer or tablet with a POS app (Point of Sale application) that works with it.

The first time you connect you have to register the Hi5 card reader to your POS app. Please follow the instructions from your POS app to connect and register. Each POS app does this differently.

Connecting via Bluetooth:

11. Make sure that the smartphone, computer or tablet you're using with the Hi5 card reader has Bluetooth turned on
12. Turn on the Hi5 card reader by pressing and holding  [Power button] for a couple of seconds
13. Pair the Hi5 card reader to the Bluetooth device
14. Wait until you see the Bluetooth icon (📶) on the Hi5 card reader screen (see #13 in section 1.2). When that icon appears, the Hi5 card reader is connected

Your device and the Hi5 card reader should find each other every time as long as the Bluetooth of your device is on. If you are prompted to enter a pairing code, enter "0000" as the code.




3.2. TRANSACTIONS

Transactions are initiated by the POS app on your smartphone, tablet or computer. Depending on your acquirer and or agreement with your POS app provider, the following features may be enabled.

3.2.1. Chip & Pin

The Hi5 card reader supports Chip & PIN cards. For Chip & PIN transactions use the EMV chip reader (see #8 in section 1.2).

This is an example of what happens in a Chip & PIN transaction:



1. Transaction is initiated in the POS app on the smartphone, computer or tablet
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. Enter PIN using the keypad and press  [OK button] (Use  [Back button] to erase and then use the keypad to re-enter pin if you make a mistake), or cancel by pressing  [Cancel button]
4. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The merchant is responsible for providing the customer with the sales receipt from the POS app and the card receipt from the Hi5 card reader printer.

3.2.2. Chip & Signature

The Hi5 card reader supports chip & signature cards. For chip & signature transactions use the EMV chip reader.

This is an example of what happens in a chip & signature transaction:

1. Transaction is initiated in the POS app on the smartphone, computer or tablet
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. Confirm the amount by pressing  [OK button] or cancel by pressing  [Cancel button]



The merchant is responsible for providing the customer with the sales receipt from the POS app and the card receipt from the Hi5 card reader printer. The customer should sign the card receipt on the signature line.

3.2.3. Fallback to Magnetic Stripe

If the Hi5 card reader cannot read the chip for some reason it will fallback to magnetic stripe. The Hi5 card reader will prompt you to remove the card from the EMV chip reader (see #8 in section 1.2) and swipe the card using the magnetic stripe reader (see #12 in section 1.2). The

Hi5 card reader might ask you to remove and insert the card into the EMV chip reader a couple of times before falling back to magnetic stripe.

This is an example of what happens if a transaction falls back to magnetic stripe:

1. Transaction is initiated in the POS app on the smartphone, computer or tablet
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. If the Hi5 card reader cannot read the chip message "REMOVE CARD" appears, remove the card
4. When message "INSERT CARD" appears, insert card in the EMV chip reader
5. If the Hi5 card reader cannot read the chip message "REMOVE CARD" appears, remove the card
6. When message "INSERT CARD" appears, insert card in the EMV chip reader
7. If the Hi5 card reader cannot read the chip message "REMOVE CARD" appears, remove the card
8. When message "SWIPE CARD" appears, swipe card using the magnetic stripe reader with the magnetic stripe facing to the front
9. Confirm the amount by pressing  [OK button] or cancel by pressing  [Cancel button]

The merchant is responsible for providing the customer with the sales receipt from the POS app and the card receipt from the Hi5 card reader printer. The customer should sign the card receipt on the signature line.

3.2.4. Magnetic Stripe

The Hi5 card reader supports cards that only have magnetic stripes. To do a transaction with a magnetic stripe card use the magnetic stripe reader (see #12 in section 1.2). If the card has a chip the Hi5 card reader will prompt you to use the EMV chip reader.

This is an example of what happens in a magnetic stripe transaction:

1. Transaction is initiated in the POS app on the smartphone, computer or tablet
2. When message "INSERT CARD" appears, swipe card using the magnetic stripe reader with the magnetic stripe facing to the front


3. Confirm the amount by pressing  [OK button] or cancel by pressing  [Cancel button]

The merchant is responsible for providing the customer with the sales receipt from the POS app, and the card receipt from the Hi5 card reader printer. The customer should sign the card receipt on the signature line.

3.2.5. Pin Bypass

Pin bypass is only enabled for specific acquirers. Pin bypass allows the customer to choose if they want to enter pin or not.

This is an example of what happens in a Chip & PIN transaction with pin bypass:

1. Transaction is initiated by the Hi5 card reader
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. To bypass the pin, press  [OK button] instead of entering the pin (if pin bypass is not enabled, the Hi5 card reader will show the message "NOT ALLOWED")
4. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The merchant is responsible for providing the customer with the sales receipt from the POS app and the card receipt from the Hi5 card reader printer.








3.2.6. Gratuity/Tips

To get the gratuity/tips feature, you have to ask for it especially from your card payment provider. If you request to include gratuity/tips as an option during the transaction process, the menu appears before pin entry where the customer can choose the amount.

Below is an example of the default gratuity/tip menu for a £20,00 sale:

Menu item
No tip
18% £3,60
20% £4,00
25% £5,00
Enter amount

This is what happens in a Chip & PIN transaction with gratuity/tips enabled:

1. Transaction is initiated in the POS app on the smartphone, computer, or tablet
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. When the gratuity/tips menu appears, scroll menu using  [Up arrow] and  [Down arrow] to select how much you want to tip
4. Press  [OK button] to select tip amount, if you select "ENTER AMOUNT":
 - a. Enter tip amount using the keypad (use  [Back button] to erase and then the keypad to re-enter amount if you make a mistake)
 - b. Press  [OK button]
5. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake)
6. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The merchant is responsible for providing the customer with the sales receipt from the POS app and the card receipt from the Hi5 card reader printer.






3.2.7. Account Type Selection

The account type selection is only enabled for specific acquirers and only appears for cards that have multiple accounts. The menu appears before pin entry where the customer can choose which account he wants to use for that transaction.

Below is an example of menu items. Please note that they differ between acquirers and cards:

Menu item
Default
Savings
Cheque/debit
Credit

This is what happens in a Chip & PIN transaction with the account type selection enabled:

1. Transaction is initiated in the POS app on the smartphone, computer or tablet
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. When the account type menu appears, scroll menu using  [Up arrow] and  [Down arrow] to find the right account type
4. Press  [OK button] to select account type
5. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake)
6. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The merchant is responsible for providing the customer with the sales receipt from the POS app, and the card receipt from the Hi5 card reader printer.

3.2.8. Cardholder Application Selection






The cardholder app selection is only enabled for specific acquirers. A menu appears before PIN entry where the customer can choose which payment application is used for that transaction.

Here is a list of menu items:

Menu item
Credit
Debit
Cash Benefit
Food Stamp
Gift Card
Private Label

This is what happens in a Chip & PIN transaction with the cardholder point of sale application selection enabled:









1. Transaction is initiated in the POS app on the smartphone, computer, or tablet

2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. When the Application Selection menu appears, scroll menu using  [Up arrow] and  [Down arrow] to find the correct payment application
4. Press  [OK button] to select that payment application
5. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake)
6. When message "REMOVE CARD" appears, remove the card from the EMV chip reader

The merchant is responsible for providing the customer with the sales receipt from the POS app, and the card receipt from the Hi5 card reader printer.

3.3. ADMINISTRATION MENU

To access the administration menu:

1. Press  [Cancel button] and then  (back button)
2. Enter password: **746723** and press  [OK button]
3. Scroll menu using  [Up arrow] and  [Down arrow]
4. To go into sub-menus press  [OK button]
5. To select menu items press  [OK button]
6. To go out of menus press  [Cancel button]






Administration menu password:
746723

About each menu item:

Menu item	Sub-menu items	Description
Version info	-	Terminal software version e.g. mPOS v.1.7.1 (236)
Device type	Bluetooth	A connection type, supported - there should be star next to Bluetooth which means it is selected.
	Save and Reset	Select to save any changes you have made in this sub-menu, the Hi5 card reader restarts.
Config	Reset flash	Resets to factory settings, next time you do a transaction the Hi5 card reader will download and install the software and configurations again.
	Save and Reset	Select to save any changes you have made in this sub-menu, the Hi5 card reader restarts.
Beep	Toggle	Turn beep on or off by selecting toggle.
Save and Reset	-	Select to save any changes you have made in the administration menu, the Hi5 card reader restarts.

3.4. VIEW INFORMATION

To view information about your Hi5 card reader:

1. Press  [Cancel button] then  [Up arrow] on the keypad
2. Scroll to see information using  [Up arrow] and  [Down arrow]
3. To exit, either wait a couple of seconds or press  [Cancel button]

About the information you see:

Menu item	Description
SN	Serial number of Hi5 card reader e.g. 1916009227
mPOS	Terminal software version e.g. v.10.1.2
TAG	Compilation type e.g. HI5
COMs	Type of connection used e.g. Bluetooth



BT	The name of your Bluetooth connection e.g. PP0615009227
Pass	Bluetooth password e.g. 0000
Addr	MAC address of the bluetooth module
Config	Configuration version e.g. 2
Flash	This has information about the flash memory, used by Handpoint quality assurance
EMV	EMV version e.g. 2.00 03 210514
Pinutil	Software library version, such as for communications
PayEngine	Software library version (regarding EMV programming)

3.5. UPDATING THE Hi5 CARD READER

It depends on the POS app (Point of Sale application) if you can update the Hi5 card reader manually. Then the update is initiated through the POS app on your smartphone, computer or tablet.



Handpoint may also push updates automatically and remotely to your Hi5 card reader.

This is what happens when Handpoint pushes a non-critical update to your Hi5 card reader:

1. Transaction is initiated by the Hi5 card reader
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader
3. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake)
4. When message "REMOVE CARD" appears, remove the card from the EMV chip reader
5. The message "UPDATING READER" appears and the Hi5 card reader starts downloading and installing the update, this only takes a couple of seconds. When the Hi5 card reader has finished the message "UPDATE COMPLETE" appears.

This is what happens when Handpoint pushes a critical update to your Hi5 card reader:

1. Transaction is initiated by the Hi5 card reader
2. When message "INSERT CARD" appears, insert card in the EMV chip reader (see #8 in section 1.2) with the chip facing up and towards the Hi5 card reader

3. Enter PIN using the keypad and press  [OK button] (use  [Back button] to erase and then the keypad to re-enter pin if you make a mistake)
4. The message "TRANS. DECLINED" appears will appear on the screen
5. When message "REMOVE CARD" appears, remove the card from the EMV chip reader
6. The message "UPDATING READER" appears and the Hi5 card reader starts downloading and installing the update which only takes a couple of seconds. When the Hi5 card reader has finished the message "UPDATE COMPLETE" appears
7. After the Hi5 card reader has finished updating, you can initiate the transaction again to charge the customer.

4. TROUBLESHOOTING

In this section are tools to help you troubleshoot. It includes instructions on how to troubleshoot communication errors between the Hi5 card reader and the backend system. There is also a section with tables with some of the possible messages that can appear on your Hi5 card reader. If you are having a problem, you can try searching these tables for the message and see what you can do.




4.1. TROUBLESHOOTING ISSUES

Here are some instructions to help you troubleshoot issues.

4.1.1. Communication Errors

If the Hi5 card reader shows a communication error message it means that the Hi5 card reader detected a communication failure. Here is what you can do to try to troubleshoot it:

Firstly, try to turn the Hi5 card reader off and on again:

1. Make sure that the smartphone, computer, or tablet you're using with the Hi5 card reader has Bluetooth turned on
2. Turn off the Hi5 card reader by pressing and holding  [Power button] for a couple of seconds and pressing  [OK button]
3. Turn the Hi5 card reader back on by pressing and holding  [Power button] for a couple of seconds

4. Wait for the Hi5 card reader to connect or follow the connection instruction from your POS app. When you see the Bluetooth icon (📶) on the Hi5 card reader screen (see #2 in section 1.2) the Hi5 card reader is connected to the POS app
5. Try to initiate a transaction again.

Secondly, disconnect the Bluetooth connection and reconnect

1. Make sure that the smartphone, computer, or tablet you're using with the Hi5 card reader has Bluetooth turned on
2. Look for the Bluetooth name (BT menu item in section 3.4) in your smartphone, computer, or tablet's Bluetooth list and disconnect according to the directions of your device
3. Reconnect the Hi5 card reader according to the directions of your device
4. Wait for the Hi5 card reader to connect or follow the connection instruction from your POS app. This may take a few seconds. When you see the Bluetooth icon (📶) on the Hi5 card reader screen (see #13 in section 1.2) the Hi5 card reader is connected to the POS app
5. Try to initiate a transaction again.

Thirdly, remove the Hi5 card reader from Bluetooth devices and pair again








1. Make sure that the smartphone, computer, or tablet you're using with the Hi5 card reader has Bluetooth turned on
2. Look for the Bluetooth name (BT menu item in section 3.4) in your smartphone, computer, or tablet's Bluetooth list and remove device/forget device according to the directions of your device
3. Make sure that the Hi5 card reader is turned on
4. Look for the Bluetooth name (BT menu item in section 3.4) in your smartphone, computer, or tablet's Bluetooth list and pair according to the directions of your device
5. Wait until you see the Bluetooth icon (📶) on the Hi5 card reader screen (see #13 in section 1.2). This may take a few seconds. When that icon appears the Hi5 card reader is connected.
6. Try to initiate a transaction again

If the problem persists, please request support from your provider (see section 5).

4.1.2. Flash Corruption Errors

If the Hi5 card reader is behaving badly in some way, it is always a good idea to reset the flash to see if it fixes the issue. Resetting the flash erases the working memory of the card reader clearing out any corrupted flash. After the flash has been reset on a card reader it needs to fetch the terminal software and terminal configurations again and will restart.

Resetting the flash:

1. Press  [Cancel button] and then  (back button)
2. Enter password: **746723** and press  [OK button]
3. Scroll menu using  [Down arrow] to **Config** and press  [OK button]
4. Select "RESET FLASH" and press  [OK button]
5. Scroll down to "Save and Reset" and press  [OK button]
6. The card reader should now restart

If the problem persists then please request support from your provider (see section 5).






4.2. HI5 CARD READER MESSAGES

Here are tables with some of the possible messages that can appear on your Hi5 card reader. If you are having a problem you can try searching these tables for the message and see what you can do.

4.2.1. Successful Transaction Messages

These are messages that can appear during a successful card transactions, in alphabetical order.

Hi5 card reader display text	Why it is displayed	Required action
------------------------------	---------------------	-----------------

AMOUNT: [amountvalue]	The Hi5 card reader needs the cardholder to validate that the correct amount has been used.	The cardholder must confirm that the amount is correct by pressing  [OK button] or cancel by pressing  [Cancel button].
AUTHORISED	A transaction has completed successfully.	No further actions are required.
COMPLETING TRANSACTION	The Hi5 card reader is finalising a completed transaction with your device.	Please wait for further instructions on the Hi5 card reader display.
PIN VERIFIED	The PIN has been verified successfully.	No further actions are required.
PIN: [amountvalue]	The Hi5 card reader is waiting for the card PIN.	The cardholder must enter their PIN and press the  [OK button] to continue or press the  [Cancel button] to cancel the transaction.
PLEASE SIGN	The cardholder must sign their name on the app or slip (depending on the app's features).	The cardholder must sign the slip.
PLEASE WAIT...	The Hi5 card reader is processing an operation.	Please wait while the Hi5 card reader completes the operation.
PRESS OK button or Cancel button	The Hi5 card reader needs confirmation to continue.	The cardholder must read all information on the display and then press either the  [OK button] or  [Cancel button] as applicable.
PROCESSING...	Cardholder authentication has completed and a financial card transaction is being processed.	Please wait for further instructions on the Hi5 card reader display.

REMOVE CARD	The card is in the Hi5 card reader and either the transaction has completed or the Hi5 card reader cannot read the chip.	Please remove the card from the Hi5 card reader.
SALE	Indicates that the current operation is a SALE transaction.	No further actions are required.
SWIPE CARD	The Hi5 card reader is waiting for a card to be swiped against the magnetic stripe reader.	Please swipe a card through the magnetic stripe card reader.
USE CHIP READER	The Hi5 card reader is waiting for a card to be inserted into the chip reader.	Please insert a card into the chip reader.

4.2.2. Other Transaction Messages



These are messages that can appear during other selected card transactions, such as refunds or reversals, in alphabetical order.

Hi5 card reader display text	Why it is displayed	Required action
REFUND	Indicates that the current operation is a REFUND transaction.	No further actions are required.
REFUND ACCEPTED	A REFUND transaction has completed successfully.	No further actions are required.
REFUND VOID	Indicates that the current operation is a reversal/voiding of a REFUND transaction.	No further actions are required.
REVERSAL ACCEPT.	Reversal/voiding of a SALE/ REFUND transaction has completed successfully.	No further actions are required.

4.2.3. Error Transaction Messages

These are messages that can appear during an unsuccessful card transactions, in alphabetical order.

Hi5 card reader display text	Why it is displayed	Required action
CANCELLED	The current operation was cancelled by either the cardholder or the merchant. Or the Hi5 card reader timed out while waiting for the card and automatically cancelled the operation.	No further actions are required.
CARD BLOCKED	The card that was used has been blocked.	Please ask the customer to retry the transaction with another card (non-blocked). No additional action required beyond this.
CARD REMOVED	The card was removed too soon during a financial transaction operation.	Please restart the operation.
COMM. ERROR CHECK CONNECTION	Indicates that the Hi5 card reader detected a communication failure between itself and the device that it was paired/connected to.	If a SALE or a REFUND transaction was in progress when this occurred then you MUST contact your provider’s support team (see section 5) and verify whether the transaction went through or not (as they can check with their real-time terminal management system). <i>If you fail to do so then you may be liable for any costs incurred due to any double charges.</i> Once you have verified that the transaction did not go through then please retry the operation.
FALLBACK TO MSR	The cards chip has failed. The data on the magnetic stripe will be used instead.	Please wait for further instructions on the Hi5 card reader display.
INCORRECT PIN	An incorrect PIN was entered.	The cardholder must re-enter their PIN.

<p>INVALID CARD</p>	<p>The Hi5 card reader could not read any data from the card.</p>	<p>Please retry the operation. If the issue persists the card may be faulty, please try another card. If the issue still persists the Hi5 card reader may require replacement, please your provider's support team for assistance (see section 5).</p>
<p>LAST ATTEMPT</p>	<p>This is the customers last available attempt for correct PIN entry.</p>	<p>Please do one of the following:</p> <ul style="list-style-type: none"> • Enter the correct PIN. • Press the  [Cancel button] to abort the transaction. • Press the  [OK button] to activate PIN bypass mode (if available).
<p>NOT PROCESSED</p>	<p>This is a generic error message that indicates that the current operation was not completed due to an unexpected error. Reasons can include:</p> <ul style="list-style-type: none"> • Communication failure between the Hi5 card reader and the back end system during an update operation. • Invalid request object from the POS app at the start of an operation. • Invalid response object from the POS app during an operation. 	<p>Please retry the operation. If the issue persists please contact your provider's support team for assistance (see section 5).</p>

PIN IS BLOCKED	The maximum number of PIN entry retries has been reached.	<p>Please wait for further instructions on the Hi5 card reader display (The Hi5 card reader may fall back to signature processing).</p> <p>The cardholder needs to contact their bank/issuer for instructions on how to get the PIN unblocked.</p>
PROCESSING ERROR	An unexpected error was encountered during transaction processing.	<p>Please retry the operation. If the issue persists please contact your provider's support team for assistance (see section 5).</p>
READ ERROR	The Hi5 card reader was unable to establish a valid communication channel with the cards chip.	Please wait for further instructions on the Hi5 card reader display.
REQUEST INVALID	A financial transaction was attempted with a magnetic stripe card that is cash only.	No further actions are required.
SALE VOID	Indicates that the current operation is a reversal/voiding of a SALE transaction.	No further actions are required.
TRANS. DECLINED	A transaction has been declined.	<p>No further actions are required. Further information may be displayed on the Hi5 card reader screen or receipt that might indicate why the transaction was declined.</p>
UNSUPPORTED CUR.	A currency has been selected in the POS app that your Hi5 card reader has not been set up for.	<p>Select the correct currency and retry the operation.</p> <p>Alternatively, please your provider's support team for assistance (see section 5) to find out if that specific currency can be supported.</p>

TRANSACTION VOID	A financial transaction was cancelled due to a cardholder not responding in time to an action or directly, by the cardholder or the merchant or the card itself. Or a signature was rejected by the merchant.	No further actions are required.
USING SIGNATURE	The card has indicated that cardholder signature is required. This can be either due to fall back (e.g. max PIN retries reached) or because the card is a signature or a signature & PIN card.	Please wait for further instructions on the Hi5 card reader display.

4.2.2. Updating Messages

These are messages that can appear while the Hi5 card reader is updating in alphabetical order.



Hi5 card reader display text	Why it is displayed	Required action
CONNECTION ERROR	The Hi5 card reader detected a communication failure between itself and the processing system during an update operation.	Please verify that your device has an internet connection and then retry the operation.
DOWNLOADING	Indicates that the Hi5 card reader is downloading its update.	No further actions are required.
INSTALLING	A configuration update for the Hi5 card reader has been validated and the Hi5 card reader is applying it.	Please wait for the completion of the update process.
NO UPDATE	An update procedure was started, but there is no pending update to download.	No further actions are required.
RESTARTING...	The Hi5 card reader is about to restart after a software update.	Please wait for further instructions on the Hi5 card reader display.

SOFTWARE x%	The Hi5 card reader is updating itself and has completed x% of the update.	Please wait for the completion of the update process.
UPDATE COMPLETE	An update operation has completed successfully.	No further actions are required.
UPDATE FAILURE!	An update has failed to complete.	Please retry the operation. If the issue persists, please your provider's support team for assistance (see section 5).
UPDATES x%	The Hi5 card reader is updating itself and has completed x% of the update.	Please wait for the completion of the update process.
UPDATING READER	Indicates that the Hi5 card reader has started an operation to update itself.	No further actions are required.
VALIDATING	A configuration update has been found for the Hi5 card reader and the Hi5 card reader is verifying its correctness.	Please wait for the completion of the update process.

4.2.3. Administration Messages

These are messages that can appear while the Hi5 card reader is idle or while you are in the administration menu.

Hi5 card reader display text	Why it is displayed	Required action
---- no config ----	No configuration is present on the Hi5 card reader and the operator has entered the administration menu and selected the version information option.	No further actions are required.

--- no ipek loaded ---	No cryptographic keys can be found on the Hi5 card reader and the operator has entered the administration menu and selected the version information option.	Please return the Hi5 card reader back for replacement.
BATTERY LOW	The battery charge level is low.	Please recharge the Hi5 card reader.
BATTERY TOO LOW	An operation was started, but the battery charge level is too low to complete the operation.	Please recharge the Hi5 card reader.
TO TURN OFF PRESS OK button or Cancel button	The power button has been pressed.	Please press the  [OK button] button to turn off the Hi5 card reader or press the  [Cancel button] to keep the Hi5 card reader turned on.

5. GETTING SUPPORT

Your provider of this integrated card payment solution should provide you with support for the whole solution, including the Hi5 card reader. They can contact Handpoint on your behalf, if needed.

Here is a table of information you can provide which can help you card payment provider or Handpoint solve your issue:

Information	Details	How it helps
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Clear description of issue	step by step description of what you do and how the Hi5 card reader behaves	The support provider can follow your directions to reproduce the issue and experience it themselves
	error message(s)	Error message(s) give an indication of where the issue lies, the support provider can look up the error message(s) in the Hi5 card reader message List to get more details
	where and when the error is appearing	To determine at what stage during a transaction there is an error which, in turn, helps to identify if the issue is at the terminal level (your Hi5 card reader) or the back-end systems.
	contact information of the parties involved	Issues get resolved faster when all contact information is available
Information about the solution	Type of terminal	Handpoint has two types of terminal, Hi5 card reader and HiPro which have different features
	Serial number of terminal (see #14 in section 1.2 or section 3.4)	Information about terminals configurations and their transactions can be retrieved by using the serial number
	Terminal software version (see section 3.3 or 3.4)	New versions of the terminal software may fix known issues
	Info about device connected to the terminal e.g. iphone6 with iOS 9.2, samsung galaxy S6 edge with Android 5.1.1 etc...	Type of device and operating system version may not be supported or some known issues with the operating system version
	Connection type e.g. Bluetooth, lightning	Different connection types may have various issues such as connectivity, driver problems, configuration etc.
Log files	Terminal Software Audit log files. It is the responsibility of the POS app to fetch logs from the terminal. Your POS app provider should be able to help you send them to support	Logs are used for troubleshooting

Screenshots of issue	error/warning messages or receipts	The receipts can include both information and error messages from the backend systems to help identify the issue
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6. GLOSSARY

3DES	Triple Data Encryption Algorithm is a security measure
Device	The hardware you are using to run the mPOS/POS application: smartphone, computer or tablet
DUKPT	Derived Unique Key Per Transaction is a secu
EMV	Europay, MasterCard and Visa. Technical standard for smart payment cards.

MOTO	Mail Order/Telephone Order. It is a type of card-not-present transaction in which services are paid for and delivered via telephone, mail, fax, or internet communication.
mPOS	Mobile Point of Sale. Specifying a payment app running on smart devices to accept card payments (as opposed to a full, third party POS app)
NFC	Near-field Communication is the technology that enables contactless payments.
P2PE	Point-to-Point Encryption is a security standard established by the PCI Security Standard Council
PCI-DSS	Payment Card Industry Data Security Standard. It is an information security standard for organizations that handle branded credit cards from the major card schemes.
POS	Point of Sale. An application which acts as cash register, typically going beyond just accepting card payments by also including other features such as basket handling (as opposed to just an mPOS app).
Provider	The contact/company who you have had direct communication with to set up your card payment solution with the Handpoint card reader(s).

7. FAQs

Questions	Answers
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<p>Are smartphones and tablets secure enough to accept card payments?</p>	<p>No, not alone. That is why we have a separate device for reading the card and PIN entry. Card detail information is not saved within the app on the smartphone or tablet. All card information is encrypted with point-to-point encryption (P2PE) and stored in Handpoint's secure environment, as certified by the Payment Card Industry Data Security Standard (PCI DSS).</p>
<p>Can I accept Mail Order/Telephone Order (MOTO) payments with my card reader?</p>	<p>No, the card must be present to make a transaction with the card reader.</p>
<p>Can I lend my card reader to a friend?</p>	<p>No, only your business has been approved for using this device, so it is not possible to lend the card reader to someone else.</p>
<p>Can I sell my card reader to someone else?</p>	<p>No, it is advised not to resell your card reader, as it is only set up for your business and would not be transferable for someone else's business. If you are considering not to use your card payment solution any longer, please contact your provider.</p>
<p>Can I use Handpoint abroad?</p>	<p>It depends on your provider and your account configuration. Please contact your provider to find out your options in using your card payment solution abroad.</p>
<p>Can I use multiple phones with my card reader ?</p>	<p>Yes you can. But everytime you connect the Hi5 card reader to a new device you need to register it according to the POS app instructions.</p> <p>However the Hi5 card reader can only connect with one device at a time.</p>

<p>Do I need an internet connection to use the Hi5 card reader?</p>	<p>Yes, you will need to connect to the internet through 3G or Wifi on your smartphone, computer or tablet for the Hi5 card reader to process payments.</p> <p>The Hi5 card reader sends the encrypted transaction to your smartphone, computer or tablet using Bluetooth and the POS app forwards the transaction to the Handpoint gateway using 3G or Wifi.</p>
<p>How are my card transactions settled?</p>	<p>Batches of your transactions are automatically closed and sent to the acquirer for settlement at midnight each day, so you don't need to carry this out.</p>
<p>What about receipts?</p>	<p>The Hi5 card reader creates a receipt for each transaction and sends to the POS app.</p> <p>The POS app is responsible for showing you and providing you a way to access the receipt e.g. through text message, email or printer (depending on the functionality of your POS app)</p>
<p>What happens if my card reader is lost or stolen?</p>	<p>There is no way to access money or card information through the card reader, so your money and information will stay safe. If your card reader is lost or stolen, get in touch your provider to let them know and discuss your card reader replacement options.</p>
<p>Why a separate card reader?</p>	<p>We use a separate secure card reader for reading the chip and entering the PIN to protect your customers card details. This method is the most secure way to accept payments today. No card data is ever stored on the Hi5 card reader, smartphone, computer or tablet.</p>