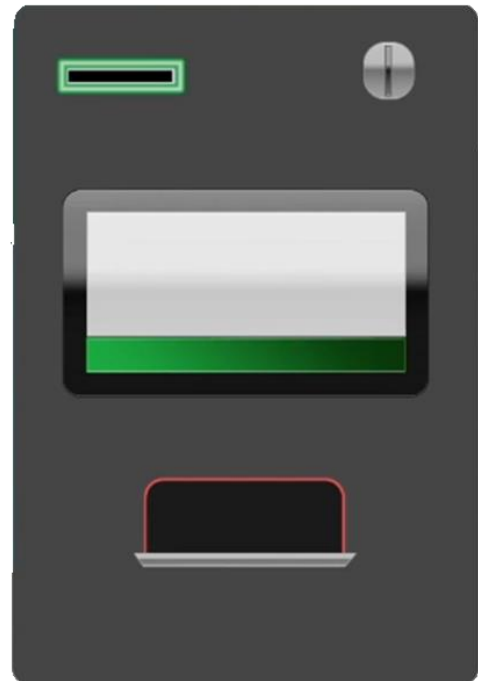




***Innovative Technology***

INTELLIGENCE IN VALIDATION

# Quick Start Guide



## CASHGENIC

Hygienic Cash Automation Kit



Document Name:	Cashgenic Quick Start Guide
Document Version:	1.0
Date of Release:	20/05/2020

## Table of Contents

<b>1</b>	<b>DOCUMENT INTRODUCTION .....</b>	<b>2</b>
1.1	RELATED DOCUMENTS .....	2
1.2	MANUAL AMENDMENTS.....	2
1.3	COPYRIGHT .....	2
1.4	LIMITED WARRANTY .....	2
1.5	PRODUCT SAFETY INFORMATION .....	3
<b>2</b>	<b>SETTING UP THE DEVICE .....</b>	<b>5</b>
2.1	WHAT'S IN THE BOX.....	5
2.2	OUT OF THE BOX CONNECTIONS .....	5
2.2.1	<i>Spectral Payout Setup</i> .....	5
2.2.1.1	Bezel Fitting .....	5
2.2.1.2	Attaching the Payout module .....	7
2.2.1.3	Lock Fitment .....	9
2.2.2	<i>SCS Setup</i> .....	9
2.2.2.1	Lock Fitment .....	9
2.2.3	<i>Cable Installation</i> .....	10
2.3	DOWNLOADING THE COMPANION APP .....	11
2.4	FIRST TIME SETUP .....	12
2.5	PAIRING THE CASHIER DISPLAY.....	12
<b>3</b>	<b>USING THE DEVICE.....</b>	<b>14</b>
3.1	GENERAL TRANSACTIONS .....	14
3.2	CANCELLING A TRANSACTION .....	16
3.3	TRANSACTION LOGS .....	16
<b>4</b>	<b>ADMIN MENU.....</b>	<b>18</b>
<b>5</b>	<b>TECHNICAL INFORMTION.....</b>	<b>19</b>
5.1	TECHNICAL DRAWINGS .....	19
5.2	CABINET DESIGN RECOMMANDATIONS.....	19



## 1 DOCUMENT INTRODUCTION

### 1.1 Related Documents

This document should be read together with the following:

- NV200S Family Manual GA02119
- Smart Coin System Family Manual GA02085

### 1.2 Manual Amendments

Rev.	Date	Amendment Details	Issued by
1.0	20/05/2020	First Issue	JB

### 1.3 Copyright

This manual set is Copyright © Innovative Technology Ltd. 2016. No part of this publication may be reproduced in any form or by any means used to make any derivative such as translation, transformation, or adaptation without permission from Innovative Technology Ltd. The contents of this manual set may be subject to change without prior notice.

### 1.4 Limited Warranty

Innovative Technology Ltd warrants each of its hardware products to be free from defects in workmanship and materials under normal use and service for a period commencing on the date of purchase from Innovative Technology Ltd or its Authorized Reseller, and extending for the length of time stipulated by Innovative Technology Ltd.

A list of Innovative Technology Ltd offices can be found in every section of this manual set. If the product proves defective within the applicable warranty period, Innovative Technology Ltd will repair or replace the product. Innovative Technology Ltd shall have the sole discretion whether to repair or replace, and any replacement product supplied may be new or reconditioned.

The foregoing warranties and remedies are exclusive and are in lieu of all other warranties, expressed or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose.

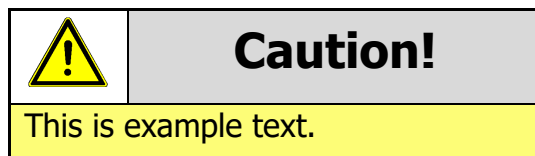
Innovative Technology Ltd shall not be liable under this warranty if it's testing and examination disclose that the alleged defect in the product does not exist or was caused by the customer's or any third person's misuse, neglect, improper installation or testing, unauthorized attempts to repair, or any other cause beyond the range of the intended use. In no event will Innovative Technology Ltd be liable for any damages, including loss of profits, cost of cover or other incidental, consequential or indirect damages arising out the installation, maintenance, use, performance, failure or interruption of an Innovative Technology Ltd product, however caused.



## 1.5 Product Safety Information

Throughout this user manual, we may draw your attention to key safety points that you should be aware of when using or maintaining the product.

These safety points will be highlighted in a box, like this:



This user manual and the information it contains is only applicable to the model stated on the front cover, and must not be used with any other make or model.



## Safety Notice! Read before using this product!

**Safety Notice - Warning.** Ensure power is removed before allowing access to the inside of this product. Ensure any static build up is discharged before allowing access to any part of this product or media contained. Always earth this product/base plate in accordance with the manual.

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The power supply terminals and/or connectors are: Not investigated for field wiring
- The investigated Pollution Degree is: 2
- The following end-product enclosures are required: Mechanical, Fire

**Sicherheitshinweis – Warnung:** Es muss sichergestellt werden, dass das Gerät von der Versorgungsspannung getrennt wird, bevor ein Eingriff in das Innere des Gerätes erfolgt. Es muss sichergestellt werden, dass jegliche statische Aufladung des Gerätes entladen wird, bevor auf das Gerät oder auf innerhalb des Gerätes befindliche Objekte zugegriffen wird. Die Erdung des Gerätes muss immer gemäß Handbuch erfolgen.

Nur für die Verwendung in oder mit kompletter Ausstattung, dessen Eignung und Kombination von der UL LLC ermittelt wurde. Bei der Installation in einem Endprodukt, muss folgendes berücksichtigt werden:

- Die Spannungsversorgungsklemmen und/oder Verbinder sind: Feldverkabelung wurde nicht untersucht
- Der untersuchte Verschmutzungsgrad ist: 2
- Folgende Anforderungen an die Gehäuse des Endproduktes sind gefordert: Mechanisch, Feuer

**Aviso de seguridad:** Asegúrese de que la alimentación está desconectada y de que toda la energía estática es descargada antes de manipular este producto. Conecte a tierra la chapa base de la manera que se indica en el manual.

Solo para uso con dispositivos con los cuales la compatibilidad ha sido certificada por UL LLC. Tras su instalación en producto acabado, tener en cuenta lo siguiente:

- Los conectores y terminales de alimentación son: No se ha investigado/especificado cableado externo.
- El grado de contaminación determinado es: 2
- Los siguientes manuales/certificados de producto final son requeridos: Mecánico, Fuego

**Avis de sécurité :** Assurez-vous que l'alimentation est coupée et que toute l'énergie statique est déchargé avant de manipuler ce produit. Connecter à la terre, la plaque de base à la manière indiquée dans le manuel.

A utiliser Seulement avec les dispositifs dont la compatibilité a été certifiée par UL LLC. Après son installation dans le produit fini, prendre en considération ce qui suit:-

- Les connecteurs et les bornes d'alimentation sont : cela n'a pas été étudié/spécifié câblage externe.
- Le degré de contamination déterminé est: 2
- Les manuels suivants / les certificats du produit final sont nécessaires : mécanique, incendie

**Bezpečnostní upozornění.** Před manipulací uvnitř tohoto produktu se ujistěte, že je produkt odpojen od zdroje elektrického napětí. Ujistěte se, že jakýkoliv elektrostatický náboj byl vybit před manipulací s jakoukoliv částí tohoto produktu nebo obsaženým médiem. Vždy uzemněte tento produkt/základovou desku v souladu s návodem.

Pouze pro použití v nebo s kompletním vybavením, kde je přijatelnost kombinace určena UL LLC. Při instalaci v konečném produktu je třeba zvážit následující:

- Napájecí svorky a/nebo konektory: Nejsou sledované pro externí kabeláž
- Sledovaný stupeň znečištění je: 2
- Následující krytí konečného produktu jsou požadované: Mechanické, Protipožární



## 2 SETTING UP THE DEVICE

### 2.1 What's in the box

The Cashgenic kit is comprised of:

- Spectral Payout
- Smart Coin System
- Android Device
- 7" Touchscreen
- 24v Power Supply
- 5v Supply
- Harnessing

All the looms have standard spade connectors to allow for easy installation, and the power supply has separate terminals for each peripheral.

### 2.2 Out of the box connections

#### 2.2.1 Spectral Payout Setup

##### 2.2.1.1 Bezel Fitting

#### 1. Open Note Path

Pull the top latch in the direction shown to unlock the note path





## 2. Open Upper Note Path

When the note path has unlocked, lift the upper part to give clear access to the front.



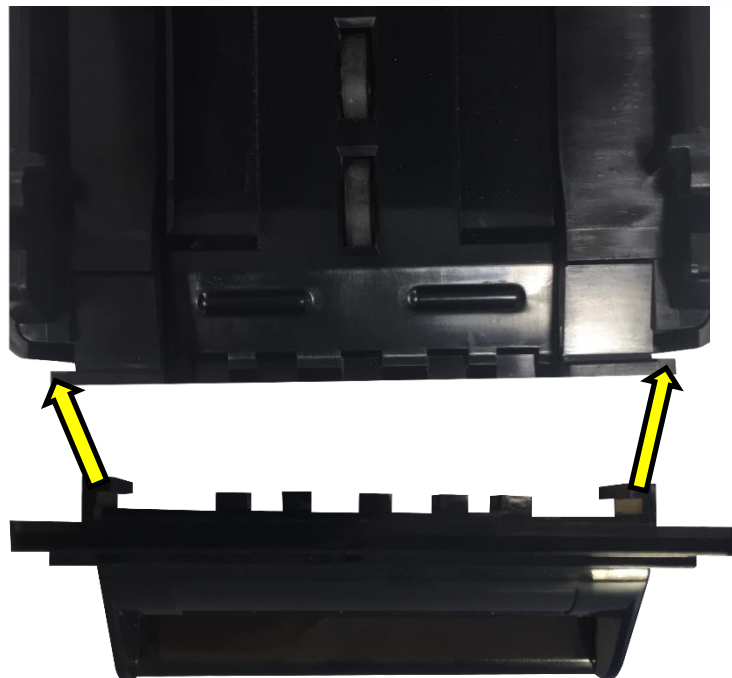
## 3. Attach Bezel Cable

Plug the bezel cable into the connection socket on the front. Ensure that the tab on the connector aligns with the notch on the socket.



## 4. Insert Bezel

Slide the bezel down into the slots on the front of the bezel



## 5. Close Note Path

Push the upper note path back down until you



hear it click firmly  
back into place



#### 2.2.1.2 Attaching the Payout module

##### 1. Slide NV200 Spectral Forward

Lift the latch on  
the front of the  
NV200 Spectral  
head and slide it  
forward on the  
chassis

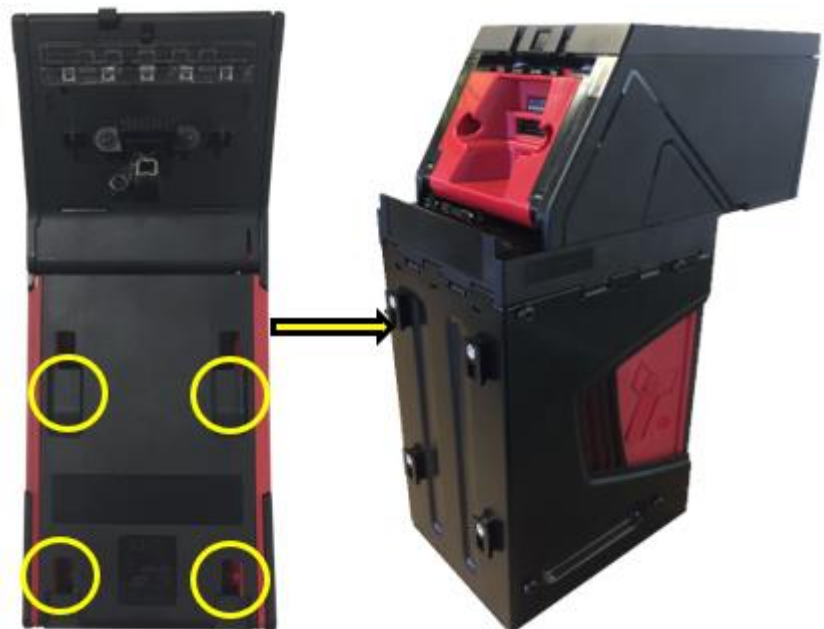






## 2. Attach the Spectral Payout module

Align the holes in the Spectral Payout with the mounting points on the back of the NV200 Spectral chassis



## 3. Lock Spectral Payout into place

Press downwards on the Spectral Payout to lock it into place on the chassis





#### **4. Dock the NV200 Spectral head**

Firmly push the NV200 Spectral back along the chassis until it locks into place on the Spectral Payout connectors.



##### **2.2.1.3 Lock Fitment**

The Spectral Payout has optional locks that can be fitted to the head and the cashbox to prevent removal. If these are required please refer to section 4.4 of the [NV200 Spectral manual \(GA02119\)](#) for information on lock specifications and fitting instructions.

##### **2.2.2 SCS Setup**

Unlike the Spectral Payout the Smart Coin System comes assembled in the box so no further assembly is required.

##### **2.2.2.1 Lock Fitment**

The Smart Coin System has optional locks that can be fitted to the Feeder and the hopper to prevent removal. If these are required please refer to section 3.4 of the [Smart Coin System manual \(GA02085\)](#) for information on lock specifications and fitting instructions.

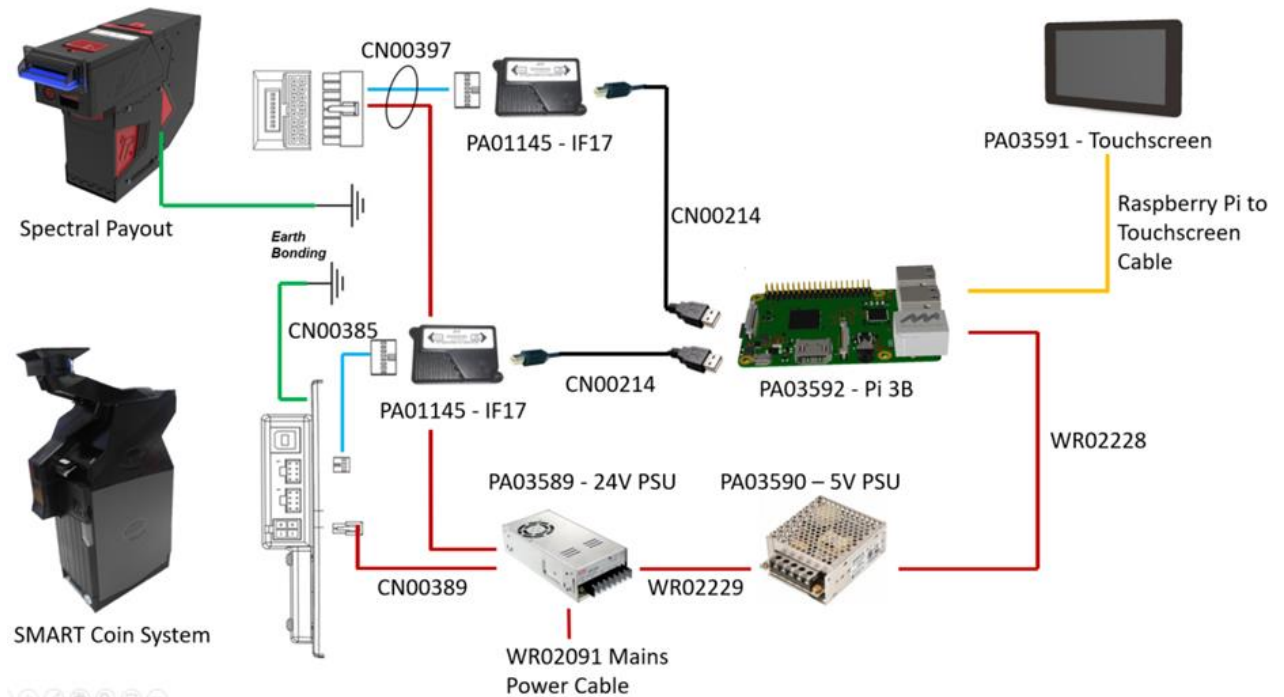


### 2.2.3 Cable Installation

In the box you will get the following:



It will need to be connected as shown below:





Part Name/Number	Description	Quantity
Android App	Bluetooth communication App for Android devices	1
IF17	USB Interface Converter	2
SD CARD	16GB, for Raspberry Pi, Including operating system	1
CN00397	SMART Payout to Host Cable Assembly	1
CN00385	SMART Hopper User Interface Cable Assembly	1
CN00389	Hopper Interface Power Cable	1
CN00214	USB A to B Cable Assembly	2
PA03592	Raspberry PI	1
PA03590	5V PSU	1
PA03589	24V PSU	1
PA03591	Touchscreen	1
n/a	Raspberry PI to Touchscreen Cable (part of PA03591)	1
WR02091	100-240V Mains Power Cable (Internal)	
WR02228	5V PSU to Raspberry PI Cable	1
WR02229	24V to 5V PSU Cable	1

## 2.3 Downloading the companion app

Cashgenic allows for social distanced transactions through the use of a remote tablet connected to the main device via Bluetooth, this secondary device can be purchased as an add on to the Cashgenic kit or purchased separately.

The minimum requirements for the companion app are:

- Android 6.0 \*Note at this time Amazon devices are not supported.
- 1gb RAM
- Bluetooth 4.0
- 100mb free space
- 7" 720p screen

If you purchase a separate device you can download the application from the link below:

<https://www.dropbox.com/sh/55up13nr1q0e27p/AACLk2gU4nLytpLyz5sq078Ea?dl=0>

**To install you will have to enable unknown sources on your device.**

**For Android versions prior to 8.0 you will need to:**

1. Open the **device settings**. Look for a gear icon in the notification shade near the top left corner and tap on it.
2. Scroll down to the **Security** section and tap to open it.
3. Scroll down to the entry labeled **Unknown sources** and read the subtext.
4. **Read the pop-up box** that tells you Google isn't responsible if you install apps from places they do not explicitly trust and click OK to enable the setting.



### For Android 8.0 and later:

1. Open the **device settings**. Look for a gear icon in the notification shade near the top left corner and tap on it.
2. Scroll down to **Apps**.
3. In the top right of the screen you should see 3 dots to open the menu. Click on it and click **Special Access**.
4. About  $\frac{3}{4}$  of the way down you will see **Install Unknown Apps**.
5. Find your devices file manager and click on it, this will bring up another menu.
6. Now enable **Allow from this source**.

**PLEASE NOTE: Some devices may differ to the instructions listed above, if you are unsure please contact the device manufacturer.**

## 2.4 First Time Setup

During the first time setup you will be able to configure:

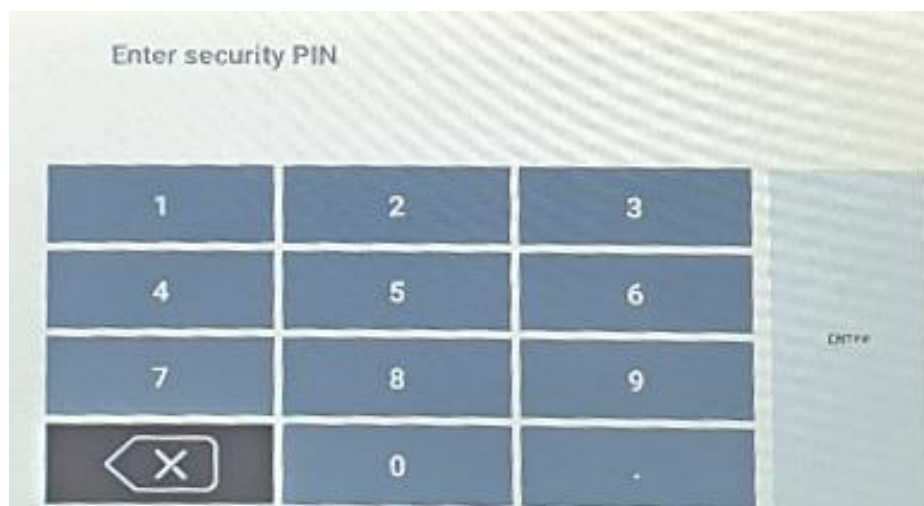
- System Language
- Time zone
- Store and device meta data
- Screen Orientation
- Float Levels

If you select the wrong option you can restart the process in the Admin menu.

**Note: Some options will only take effect at the next power up**

## 2.5 Pairing the cashier display

When you first power the Cashgenic system you will notice a red triangle in the top left of the main display, this indicates the remote display is currently not connected. To pair the device you will have to enter the admin menu. To do this click the G on screen 5 times. This will bring up the login screen as shown below:



The default password is 123456, type this and hit Enter.

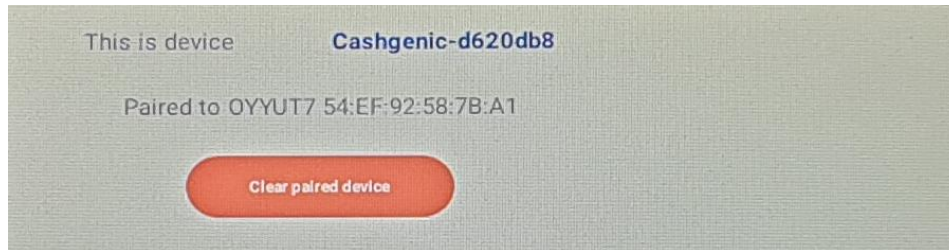
You will now see the admin menu, to pair a device hit 'pairing', at this point make sure the remote tablet has it's Bluetooth enabled and is visible.





Once the remote device is ready click Scan, after around 10s you should see the tablet's name appear. Clicking on the device will initiate the pairing process – you will then be prompted on the remote tablet to confirm.

Once the devices have paired you will see it appear on the left side of the main display.



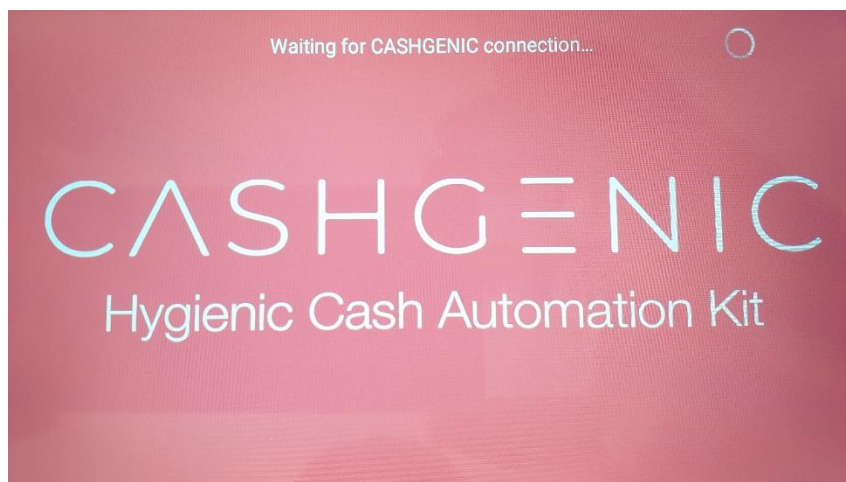
You can now exit admin mode – this is done by pressing the back button twice.

When you open the companion app it will now be able to communicate to the Cashgenic application.

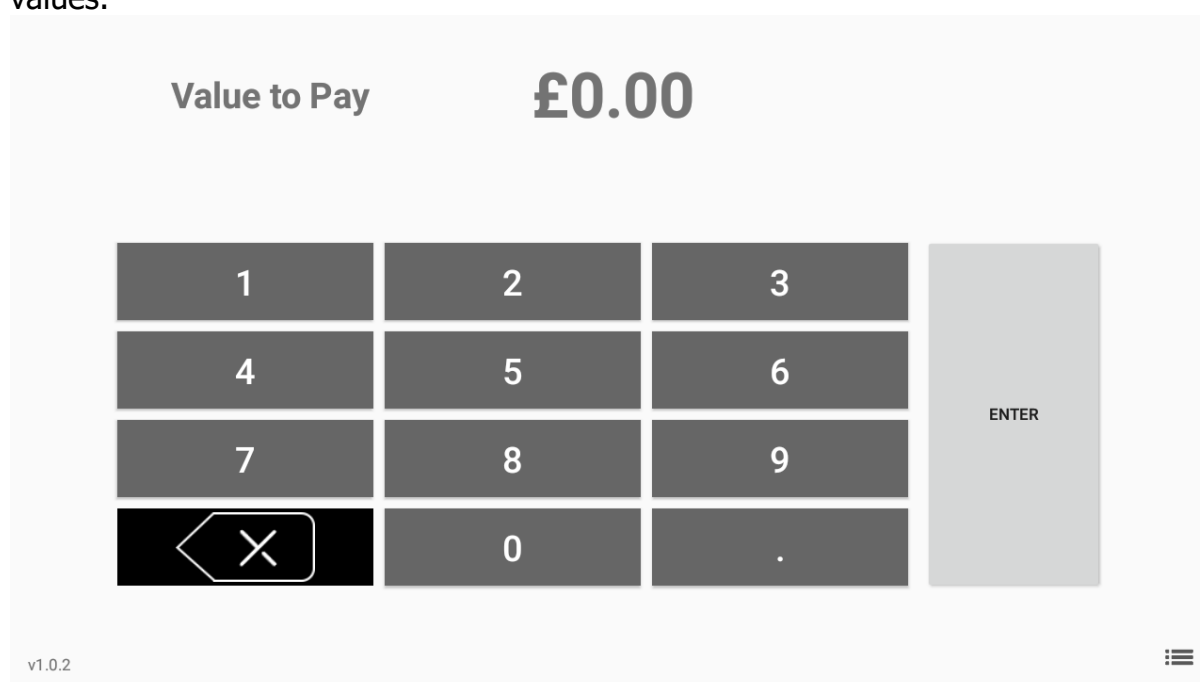


### 3 USING THE DEVICE

To begin using the Cashgenic device you will need to open the companion app on your remote tablet. The initial loading screen is shown whilst the app establish connection to the main device:



Once a connection has been established the screen will change to a keypad to enter values.





#### 3.1 General Transactions

To begin enter the value to pay on the screen and hit return, this will enable both the Spectral Payout and Smart Coin System.



Value to Pay **£5.00**

1	2	3	ENTER
4	5	6	
7	8	9	
 X	0	.	

v1.0.2 

The screen on the main display will also change to reflect the transaction:

**CASHGENIC**

*Total amount* **£5.00**

*You have paid*

*Change*

Once the customers enters cash the value accepted to date will be displayed on both screens, once the transaction is complete the cashier can acknowledge it and close the transaction.

*Requested amount* **£5.00**

*Customer has paid* **£5.00**

*Change paid* **£0.00**

Transaction Complete

95f95107-decb-432e-b733-c038e76dff0c

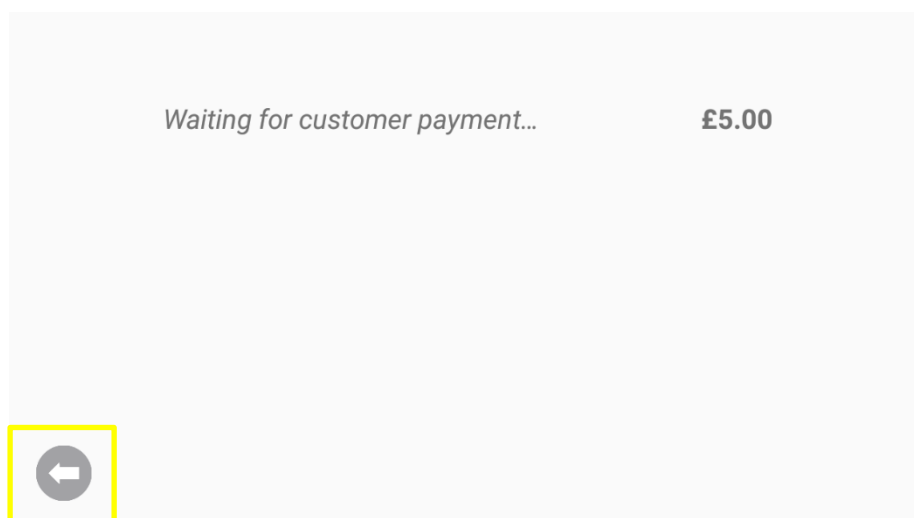
**Done**



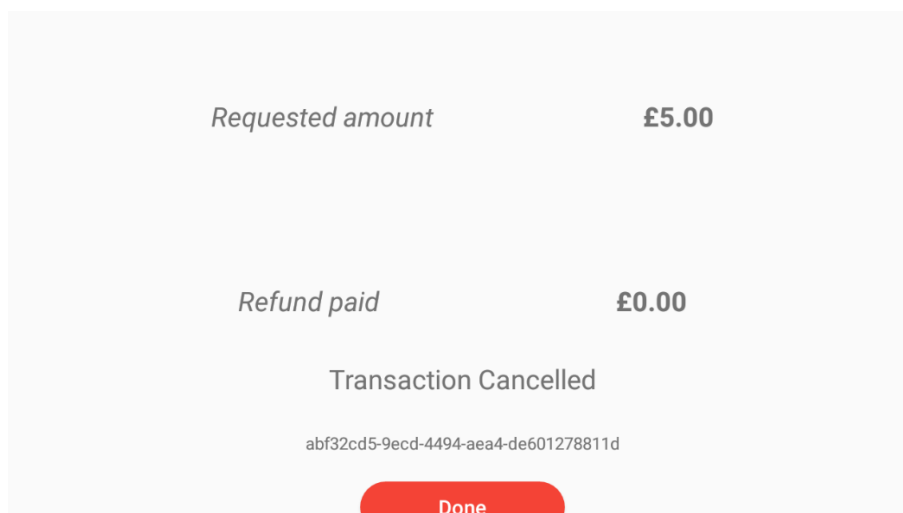


## 3.2 Cancelling a transaction

To cancel a transaction simply click the back button in the bottom left of the display:



If notes and coins have been entered already they will be returned to the user and that will be reflected in the transaction log:



## 3.3 Transaction logs

All transactions are logged, and these can be viewed by clicking the menu button in the bottom right of the companion app.



Value to Pay

£0.00

1	2	3	ENTER
4	5	6	
7	8	9	
	0	.	

v1.0.2

The initial screen shows an overview of the transactions, however the cashier can get more detail by clicking on a particular record:

2020-05-20 11:26:44	7bded2	£1.75
2020-05-20 11:28:43	e2af16	£5.00
2020-05-20 11:28:52	95f951	£5.00
2020-05-20 11:41:19	abf32c	£5.00

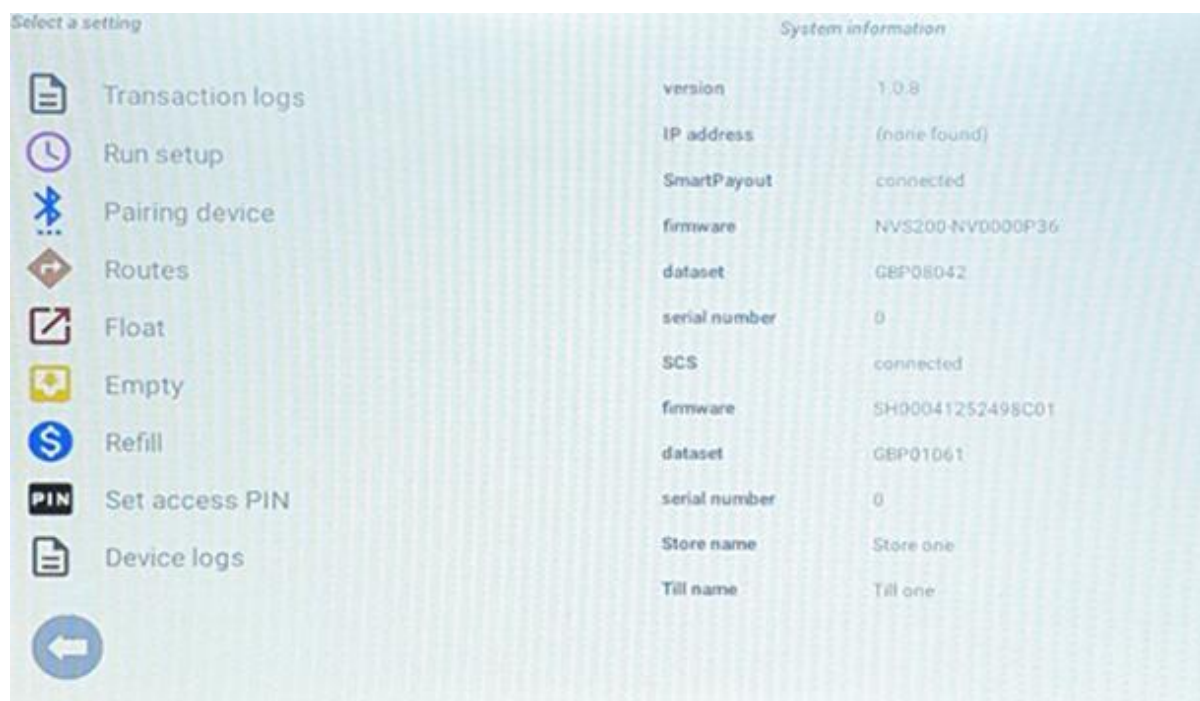
New Transaction abf32cd5

2020-05-20 11:41:19	payment request	£5.00
2020-05-20 11:41:23	payment cancelled	£0.00
2020-05-20 11:41:23	payment cancelled complete	£0.00



## 4 ADMIN MENU

The admin menu allows the manager to configure the device



On the left hand side is the settings menu and the right side shows current system information e.g. dataset & FW versions.

Below is a brief summary of the settings:

Setting	Summary of features
Transaction Logs	Allows the user to view the transaction logs for the device.
Run Setup	This restarts the 1 <sup>st</sup> time setup so allows you to set languages, screen orientation, time zones, store meta data and float levels
Pairing Device	This allows the user to pair a new companion device to the system.
Routes	This allows the user to modify which notes go to payout and which are destined for the cashbox.
Float	Allows the user to modify float levels and to flush the devices down to that level
Empty	Allows the user to perform a complete purge of the system
Refill	Allows the user to enter notes and coins to replenish the devices.
Set access PIN	The user can set a new security code to enter the admin screen
Device Logs	System logs used for debugging.



---

## 5 TECHNICAL INFORMATION

---

### 5.1 Technical Drawings

3D stp files are available for download, from the links below:

SCS:

<https://www.dropbox.com/s/dg47hlcwpbg7hhs/SMART%20Coin%20System.zip?dl=0>

Spectral Payout:

[https://www.dropbox.com/s/40elqno8dk3p4o2/NV200S\\_SPO\\_1000n\\_StandardBezel.zip?dl=0](https://www.dropbox.com/s/40elqno8dk3p4o2/NV200S_SPO_1000n_StandardBezel.zip?dl=0)

Cashgenic Peripherals:

<https://www.dropbox.com/s/02cb9wl0171hzmi/Cashgenic%20Peripherals.zip?dl=0>

### 5.2 Cabinet Design Recommendations

ITL provide a basic template that can be modified to suit the end user application, this template can be downloaded from the link below:

<https://www.dropbox.com/sh/0yodeb0zld9hqx6/AAA5ITkEmgtLr0-FhhIhwzjsa?dl=0>

From previous experience please find below a list of recommendations when designing a custom enclosure:

- Ensure the box and peripherals have a good earth connection
- Ensure the Raspberry PI has sufficient shielding to prevent interference from the peripherals.
- Where the PI is mounted should have a panel that will allow the Bluetooth signal through – this could be where the customer branding is located.
- Ensure there is a cashbox that the device can use to purge excess coins to.
- Placing metal sheets too close to the lip of the SCS can cause the devices metal detector to trigger unexpectedly.