

SECTION 4

SMART PAYOUT MANUAL SET

MECHANICAL AND ELECTRICAL MANUAL

INTELLIGENCE IN VALIDATION

Innovative Technology assume no responsibility for errors, omissions, or damages resulting from the use of information contained within this manual.



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4. MECHANICAL AND ELECTRICAL MANUAL

This section is one part of a complete manual set: Design Engineers who are designing a host machine cabinet, or looking to integrate the SMART Payout unit into an existing cabinet would need to read this section.

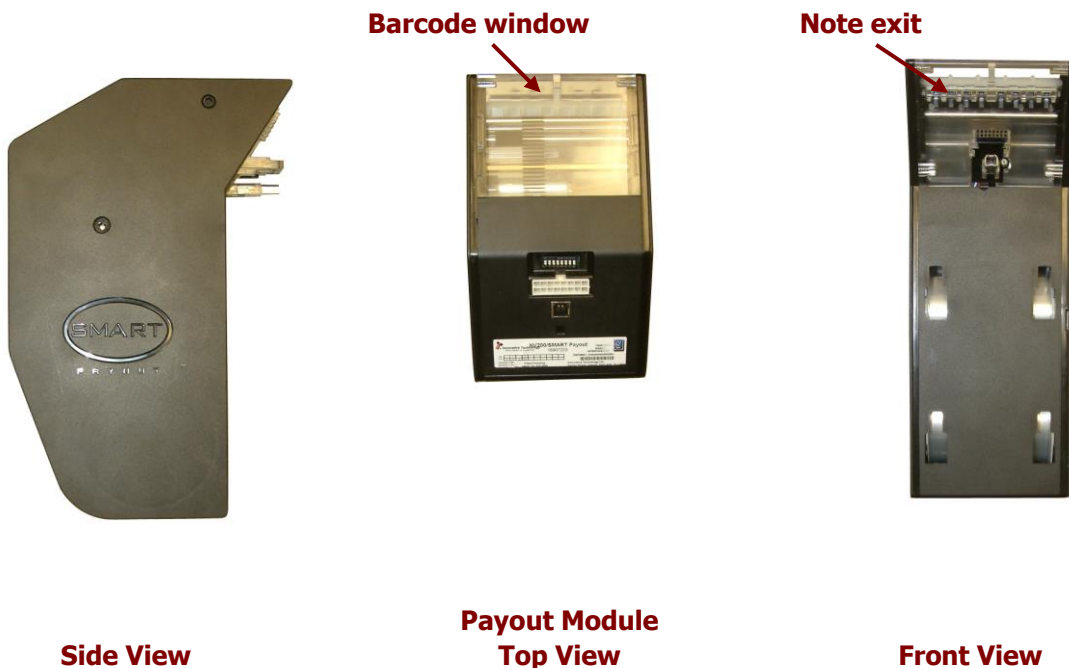
This section contains the all the mechanical and electrical information a designer needs to effectively integrate the SMART Payout unit into a host machine.

4.1 Introduction

The SMART Payout unit is made up of three basic components: an NV200 Validator, a cashbox and a payout module (as shown below). The Payout module is an add-on designed to be fitted to the Innovative Technology NV200 bank note validator.



The SMART Payout unit is a device that can validate, store and later dispense up to 70 banknotes of mixed denominations.




Validated bank notes can be stored in the NV200’s secure cashbox or travel into the payout module if needed for future payouts. The SMART Payout unit works with any SMART Payout currency dataset created by Innovative Technology Ltd.

4.2 Assembly and Fitting Instructions

Connecting the payout module to an NV200 validator is a simple operation, described in the steps outlined here:

1. Remove the NV200 cash box from the metal chassis
2. If installing into a host machine, the NV200 chassis is then mounted by using the tapped holes on either side of the chassis using 4 x M4 fixing screws and a suitable mounting bracket



 **Information**

Check fixing screw length before final installation to avoid damage to the cash box.

The length of the fixing screws fitted to either side of the chassis must be no longer than 6 mm plus the thickness of the mounting bracket.

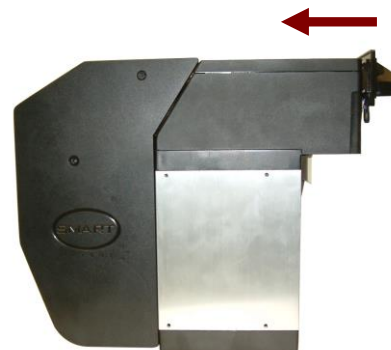
3. Unlock the NV200 cashbox and head release lock (if fitted)
4. Lift the silver head release catch located on the front of the NV200
5. Slide the head unit forward and lift up



6. Mount the payout module using the mounting brackets on the rear of the NV200 chassis
7. Replace the NV200 head unit taking care that the connectors on the payout module line up with the connectors on the rear of the NV200



8. Ensure the NV200 head unit is securely in place – **check that the head release catch is fully down**



Information

Payout module removal.

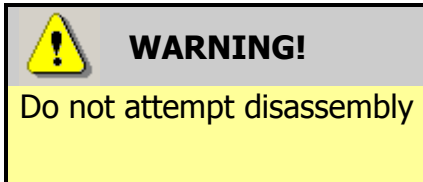
The payout module cannot be removed until the head unit has been slid forwards.

The technical drawings which can be found at the end of this section show all the dimensional information needed to mount the unit.



The NV200 has the provision of fitting three locks for extra security. One lock can be added to the front of the NV200 that locks the validator head and cash box into position without the need of external brackets, and another two locks can be added to the cash box itself.

The cams required for the locks are supplied with the NV200 and can be found in the cash box. Details of how to fit the locks can be found on the drawings at the end of this section.



Do not attempt to disassemble the payout module or validator head – trying to do this could cause personal injury and will damage the unit beyond repair.

4.3 Technical Specifications

The full technical specifications for the SMART Payout unit can be found in Section 6, Appendix B of this manual set. A brief summary is given here:

DC Voltage	Minimum	Nominal	Maximum
Absolute limits	10.8 V	12 V	13.2 V
Supply ripple voltage	0 V	0V	0.25 V @ 100 Hz
Supply Current (when connected to an NV200):			
Standby	400 mA		
Running	3 A		
Peak (motor stall)	5 A		

Interface Logic Levels	Logic Low	Logic High
Inputs	0 V to 0.5 V	+3.7 V to +12 V
Outputs (2.2 k Ω pull-up)	0.6 V	Pull-up voltage of host interface
Maximum current sink	50 mA per output	

We recommend that your power supply is capable of supplying 12V DC at 6.3 A.

TDK Lambda produces a suitable power supply (model SWS75-12). This power supply is available from a variety of suppliers including Farnell (stock code 1184648) and RS (stock code 466-5904).

4.4 Earth Bonding

It is **very** important that the cashbox chassis is bonded to earth, as lack of proper bonding can cause communication issues and failures with the SMART Payout unit.

The earth bond should be made to any of the 8 holes in the side of the cashbox and be bonded to mains earth, typically through the Power Supply Unit.

Information

Earth resistance.

The resistance between the cashbox and the Earth pin on the mains plug should be less than 0.7 ohms.

4.5 Cable Specifications

The **minimum** specification for wire used in power cables for the SMART Payout unit is given here:

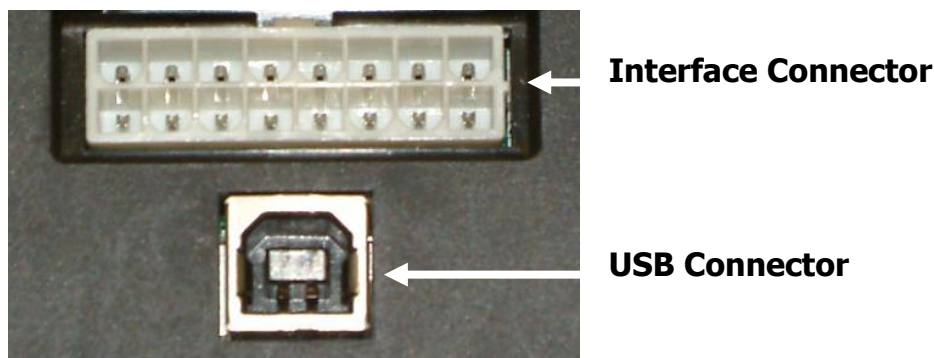
Minimum AWG	Nominal current rating	Peak current rating	Cable rating	Insulation rating
24	3 A	5 A	6 A	80 °C

Do not use wire of an inferior specification, as this can cause operating problems with the SMART Payout unit.

4.6 Electrical Interfaces

SMART Payout

All the connectors needed to set up the SMART Payout unit are easily accessible on the top of the casing: there are two connectors that are used to allow interfacing and programming:



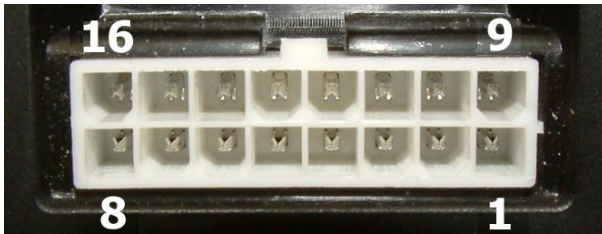


Information

Power always required regardless of connection type.

Power is always required on pins 1 and 9 of the 16 way connector.

The first connector is a 16 pin socket used to interface the SMART Payout unit to the host machine. The pin numbering of the socket is shown below, as well as an overview of the socket connections:



Pin	Description
1	0V / Ground Connection
9	+12V DC
14	Serial Data In (Rx)
16	Serial Data Out (Tx)

The USB connector is a standard Type B USB socket. The USB socket can be used for programming the SMART Hopper unit and also bench testing – a USB 2.0 compliant Type 'A' to 'B' lead can be used to do this. USB cables should be electrically shielded and less than 5 metres long. **Please note:** Direct USB should **NOT** be used for Host communications. If USB is required than our IF17 (TTL to USB) should be used.


SMART Payout SSP Interface:

Pin	Name	Type	Description
1	GND	Input	GND
2	Factory use only		Do not connect
3			
4	RxD Opto -	Input	Opto RxD -
5	Factory use only		Do not connect
6	RxD Opto +	Input	Opto RxD +
7	Factory use only		Do not connect
8	TxD Opto Emitter	Output	Opto isolated TxD Emitter
9	V In	Input	+12 V DC
10	Factory use only		Do not connect
11	RxD RS232	Input	RS232 RxD
12	Factory use only		Do not connect
13	TxD Opto Collector	Output	Opto Isolated TxD Collector
14	RxD	Input	TTL RxD
15	TxD RS232	Output	RS232 TxD
16	TxD	Output	TTL TxD



SMART Payout ccTalk (CC2) Interface:

Pin	Name	Type	Description
1	GND	Input	GND
2	Factory use only		Do not connect
3			
4			
5			
6			
7			
8			
9	V In	Input	+12 V DC
10	Factory use only		Do not connect
11			
12			
13			
14	RxD	Input	TTL RxD
15	Factory use only		Do not connect
16	TxD	Output	TTL TxD

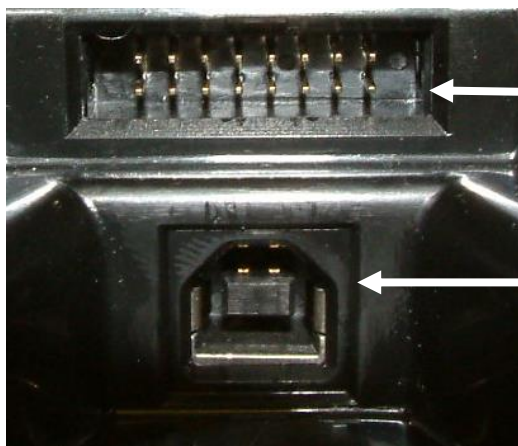


WARNING!
Risk of unit damage

Do not make any connections to the interface socket pins marked '**Do not connect**' – making connections to these pins could cause severe damage to the unit.

NV200

As with the payout module, the NV200 validator has two connectors that are used to allow interfacing and programming; these connectors are easily accessible at the back of the validator – be aware that these connectors will not be accessible if the payout module is fitted.




Interface Connector

USB Connector



The first connector is a 16 pin socket used to interface the NV200 either to the host machine or the payout module. The pin numbering of the socket is shown here:





Caution!
Pin numbering differences

The pin numbering sequences on the NV200 and the payout module are different – bear this in mind if making your own cables.

The second connector is a USB connector – this is a standard Type 'B' USB socket, and is used for interfacing to the payout module; it can also be used for programming and serial communications. The function of pins 1 to 9 can change depending on which machine interface is being used with the NV200. When used with the payout unit, the validator will be using either SSP or ccTalk (CC2) interfaces; the socket connections for each of these interfaces are shown in the tables below:


NV 200 SSP Interface:

Pin	Name	Type	Description
1	TxD	Output	TTL TxD
2	TxD Opto Emitter	Output	Opto isolated TxD Emitter
3	RxD Opto +	Input	Opto RxD +
4	RxD Opto -	Input	Opto RxD -
5	RxD	Input	TTL RxD
6	TxD RS232	Output	RS232 TxD
7	RxD RS232	Input	RS232 RxD
8	Factory use only		Do not connect
9	TxD Opto Collector	Output	Opto Isolated TxD Collector
10	Factory use only		Do not connect
11			
12			
13			
14			
15	V In	Input	+12 V DC
16	GND	Input	GND



NV200 ccTalk (CC2) Interface:

Pin	Name	Type	Description
1	TxD	Output	TTL TxD – connect to pin 5
2	Factory use only		Do not connect
3			
4			
5			
6	Factory use only		Do not connect
7			
8			
9			
10			
11			
12			
13			
14			
15	V In	Input	+12 V DC
16	GND	Input	GND

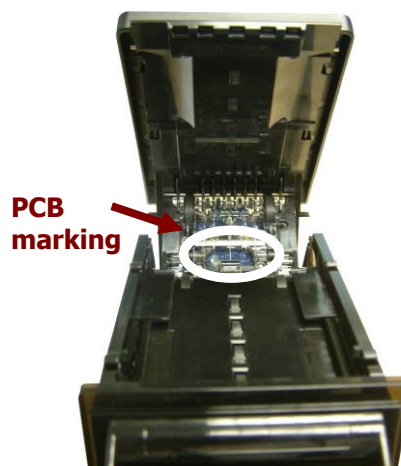


WARNING!
Risk of unit damage

Do not make any connections to the interface socket pins marked '**Do not connect**' – making connections to these pins could cause severe damage to the unit.

Opto-isolation and RS232 communications is only available on units with an issue number of 4 or greater. You can check the issue number on the validator as shown here:

Open the NV200 validator lid and check the marking on the PCB where shown in this picture – the marking needs to read **PB266_4**

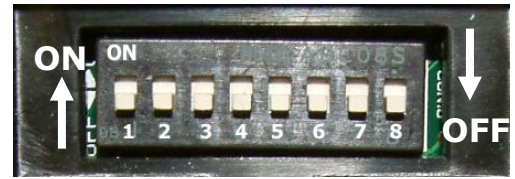


If the issue number is less than 4, TTL is the only electrical communication type possible without the use of additional hardware.

4.7 DIP Switches

SMART Payout

The SMART Payout unit has a Dual Inline Package (DIP) switch bank that is used to set the various options for the unit. A summary of the switch options are shown below:



Switch	Option	Default Setting
1	Not Used	OFF
2	Not Used	OFF
3	Not Used	OFF
4	Not Used	OFF
5	Not Used	OFF
6	Not Used	OFF
7	Stop update from NV200	OFF
8	Force diverter to close (unit must be powered up)	OFF

NV200

The NV200 validator also has a Dual Inline Package (DIP) switch bank that is used to set the various options for the unit. A summary of the switch options are shown below:



Switch	Option	Switch OFF (↓)	Switch ON (↑)	Default Setting
1	Disable Barcode	Read enabled	Read disabled	OFF
2	Channel 1 Inhibit	Channel enabled	Channel disabled	OFF
3	Channel 2 Inhibit	Channel enabled	Channel disabled	OFF
4	Channel 3 Inhibit	Channel enabled	Channel disabled	OFF
5	Channel 4 Inhibit	Channel enabled	Channel disabled	OFF
6	Channel 5 Inhibit	Channel enabled	Channel disabled	OFF
7	Channel 6 Inhibit	Channel enabled	Channel disabled	OFF
8	Programming Mode	*With power on, switch to ON then back to OFF to activate programming mode		OFF

* When DIP switch 8 is turned on and off, the bezel LEDs will flash on and off quickly and then reset.

WARNING!

Risk of unit damage

When in programming mode, do not turn off the power before the operation is complete as this will make the unit unusable.

4.8 Basic Operation



The SMART Payout unit is a device that can validate, store and later dispense up to 70 banknotes of mixed denominations. The payout module is an add-on designed to be fitted to the Innovative Technology NV200 bank note validator.





Validated bank notes can be stored in the NV200’s secure cashbox or travel into the payout module if needed for future payouts. The SMART Payout unit works with any SMART Payout currency dataset created by Innovative Technology Ltd.

Bank notes accepted by the payout module are not visible once inside the unit and they cannot normally be taken out manually.

The SMART Payout unit has two Light Emitting Diode (LED) indicators that are used to show the status of the unit (one Red, one Green) – these can be found on the back of the unit, below the USB connector. If the SMART Payout unit is operating normally, only the Green LED should be lit: when operating normally this LED will flash once every second.

The SMART Payout unit has an inbuilt fault detection facility. If there is a configuration or other error, the Status Indicator LEDs will flash in a particular sequence.

A summary of the Flash Codes for the SMART Payout unit is shown below:

Status Indicators		Flashes	Indicated Error	Comments
Red	Green			
		0	No LEDs lit	No power
		1	Motor / barcode error	Check tape in window
		2	Note sensor error	
		3	EEPROM error	Reprogram unit (see Section 3 of this manual set)
		4	Payout jammed	Remove trapped note (see Section 4 of this manual set)
		5	Diverter error	Switch DIP switch 8 on and off
		0	Both LEDs on (no flash)	Turn power on and off
		1	Power reset	For information only
		2	Wakeup from low power	For information only
		3	Software reset	For information only
		4	Software command	For information only
		5	User manual reset	For information only
		6	Power supply issue	Check power supply
		7	Unknown cause	For information only
		1 every second	None	All OK



When the payout module is installed on an NV200 bank note validator additional fault finding help is available, as the NV200 has its own set of Flash Codes. These are displayed by the LEDs in the front bezel of the validator.

A summary of the Flash Codes for the NV200 is shown below:

Flashes		Indicated Error	Comments
Red	Blue		
0	0	None	
1	1	Note path open	Close note path
	2	Note path jam	Remove obstruction and follow the cleaning procedure in Subsection 4.9 of this manual
	3	Unit not initialised	Contact ITL technical support
2	1	Cashbox removed	Refit cashbox
	2	Cashbox jam	Remove trapped notes
3	1	Firmware checksum error	Download new firmware
	2	Interface checksum error	
	3	EEPROM checksum error	Download new firmware
	4	Dataset checksum error	
4	1	Power supply too low	Check power supply
	2	Power supply too high	
	3	Card format	Reprogram programming card
	4	Payout reset	Turn power on and off
5	1	Firmware mismatch	Reprogram unit



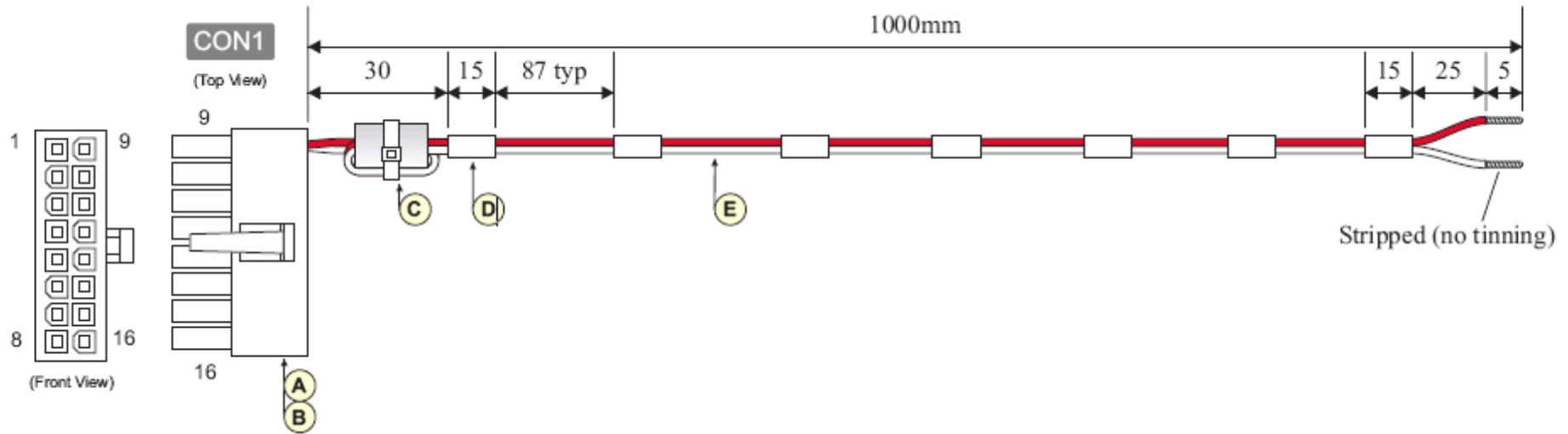
4.9 Spare Parts

Payout module

The Payout module is a 'sealed' unit and there are no user-replaceable spare parts. However, several cables designed to be used with the module are available, and these are shown below:

ITL Part Number	Description	Details
CN214	USB Cable	USB 2.0 Compliant Type A to Type B cable
<p>The diagram shows a USB 2.0 compliant Type A to Type B cable. It features a Type A connector on the left and a Type B connector on the right. Dimensions are provided for both connectors and the cable body. The Type A connector has a maximum width of 8 mm and a maximum height of 16 mm. The Type B connector has a maximum width of 10.5 mm and a maximum height of 11.5 mm. The cable body length is 48 ± 1.0 mm. The distance from the end of the cable to the start of the connector housing is 11.75 mm minimum. Pin labels include PIN 1, PIN 4, PIN 3, PIN 2, and PIN 4.</p>		
<p>Notes: Not to be used for Host communications. Programming Only. USB cable should be USB 2.0 compliant, electrically shielded and less than 5 metres long.</p>		

ITL Part Number	Description	Details
CN370	SMART Payout power cable	Provides 12V supply only to SMART Payout



COMMENTS:

Please consult the tables on the next page for pin out and connector information.

WARNING!
 Use correct wire gauges

If you choose to make your own cables, you must make sure that the wire gauges are suitable for use with the SMART Payout unit. The minimum wire gauge for the CN370 power cables is **24 AWG**, with **22 AWG** being recommended.



CN370 Parts List

Item	Qty	Description	Supplier	Alternative
A	1	2 x 8 way 4.2mm pitch latched housing, 6A derated	Molex 3901-2165	Farnell 1632113
B	4	Tin plated female crimp	Molex 39-00-0038	Farnell 1462545
C	1	Type 'T' toroidal core, 16.5 x 8.2 x 16mm	Paddiford 10-13-165082160-0	RS 261-8928
D	10	Black heat shrink sleeving	---	---
E	2	22 AWG stranded wire, PVC insulated	---	---

CN370 Connectivity

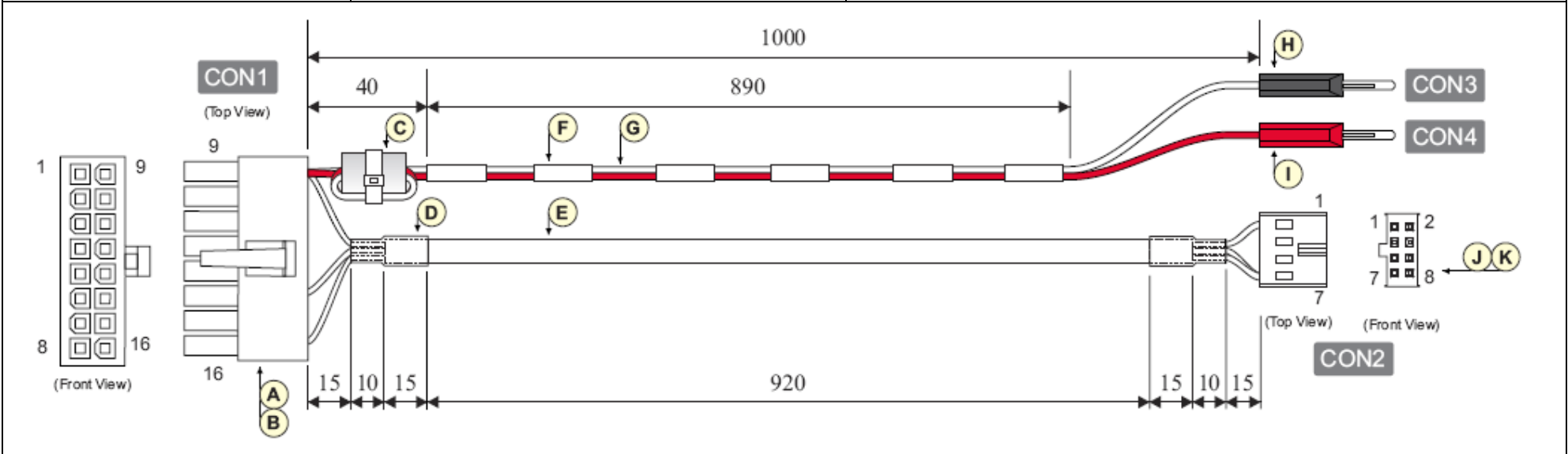
Connector	Pin	Gauge	Colour	Comments
CON1	1	22 AWG	Black	GND
	9	22 AWG	Red	V IN

Notes:

CON1 Pins 8 and 16 have crimps fitted but these are not connected.



ITL Part Number	Description	Details
CN391	SMART Payout to SMART Hopper eSSP interface cable	Connects SMART payout to SMART hopper for eSSP communications. Also provides 12V supply to SMART Payout



COMMENTS:

Please consult the tables on the next page for pin out and connector information.

WARNING!
 Use correct wire gauges

If you choose to make your own cables, you must make sure that the wire gauges are suitable for use with the SMART Payout unit. The minimum wire gauge for the CN391 power cables is **24 AWG**, with **22 AWG** being recommended.

CN391 Parts List

Item	Qty	Description	Supplier	Alternative
A	1	2 x 8 way 4.2mm pitch latched housing, 6A derated	Molex 3901-2165	Farnell 1632113
B	4	Tin plated female crimp	Molex 39-00-0038	Farnell 1462545
C	1	Type 'T' toroidal core, 16.5 x 8.2 x 16mm	Paddiford 10-13-165082160-0	RS 261-8928
D	2	Black heat shrink sleeving	---	---
E	1	3 core 24 AWG stranded cable, AWM type 2464	---	---
F	10	Black heat shrink sleeving	---	---
G	2	22 AWG stranded wire, PVC insulated	---	---
H	1	Stackable black 4mm banana plug	Deltron 553-0100-01	Farnell 1101106
I	1	Stackable red 4mm banana plug	Deltron 553-0500-01	Farnell 1101199
J	1	2 x 4 way 2.54mm pitch housing with key	Molex 90142-0008	Farnell 3291571
K	4	Tin plated crimp	Molex 90119-2110	Farnell 9733272

CN391 Connectivity

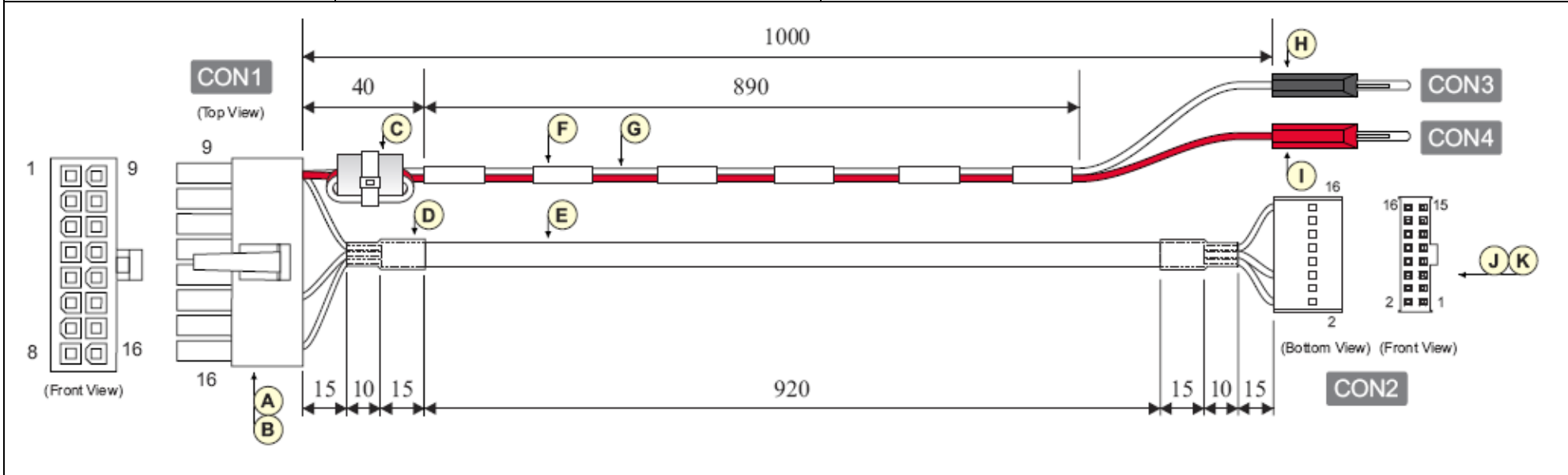
CON1	CON2	CON3	CON4	Gauge	Colour	Comments
Pin						
16	8	---	---	24 AWG	Brown	SSP Rx on hopper < > SSP_Txd on payout
14	7	---	---	24 AWG	Orange	SSP Tx on hopper < > SSP_Rxd on payout
9	---	---	1	22 AWG	Red	V IN
1	2	1	---	24/22 AWG	Black	GND

Notes:

CON1 Pin 1 has two wires crimped together. CON2 Pin 1 has a crimp fitted but this is not connected.



Part Number	Description	Details
CN397	SMART Payout eSSP interface cable	Provides 12V supply and eSSP communications to SMART Payout



COMMENTS:

Please consult the tables on the next page for pin out and connector information.

WARNING!
 Use correct wire gauges

If you choose to make your own cables, you must make sure that the wire gauges are suitable for use with the SMART Payout unit. The minimum wire gauge for the CN397 power cables is **24 AWG**, with **22 AWG** being recommended.

CN397 Parts List

Item	Qty	Description	Supplier	Alternative
A	1	2 x 8 way 4.2mm pitch latched housing, 6A derated	Molex 3901-2165	Farnell 1632113
B	4	Tin plated female crimp	Molex 39-00-0038	Farnell 1462545
C	1	Type 'T' toroidal core, 16.5 x 8.2 x 16mm	Paddiford 10-13-165082160-0	RS 261-8928
D	2	Black heat shrink sleeving	---	---
E	1	3 core 24 AWG stranded cable, AWM type 2464	---	---
F	10	Black heat shrink sleeving	---	---
G	2	22 AWG stranded wire, PVC insulated	---	---
H	1	Stackable black 4mm banana plug	Deltron 553-0100-01	Farnell 1101106
I	1	Stackable red 4mm banana plug	Deltron 553-0500-01	Farnell 1101199
J	1	2 x 8 way 2.54mm pitch housing with key	Molex 90142-0016	Farnell 3291613
K	4	Tin plated crimp	Molex 90119-2110	Farnell 9733272

CN397 Connectivity

CON1	CON2	CON3	CON4	Gauge	Colour	Comments
Pin						
16	1	---	---	24 AWG	Orange	SSP_Txd
14	5	---	---	24 AWG	Brown	SSP_Rxd
9	---	---	1	22 AWG	Red	V IN
1	16	1	---	24/22 AWG	Black	GND

Notes:

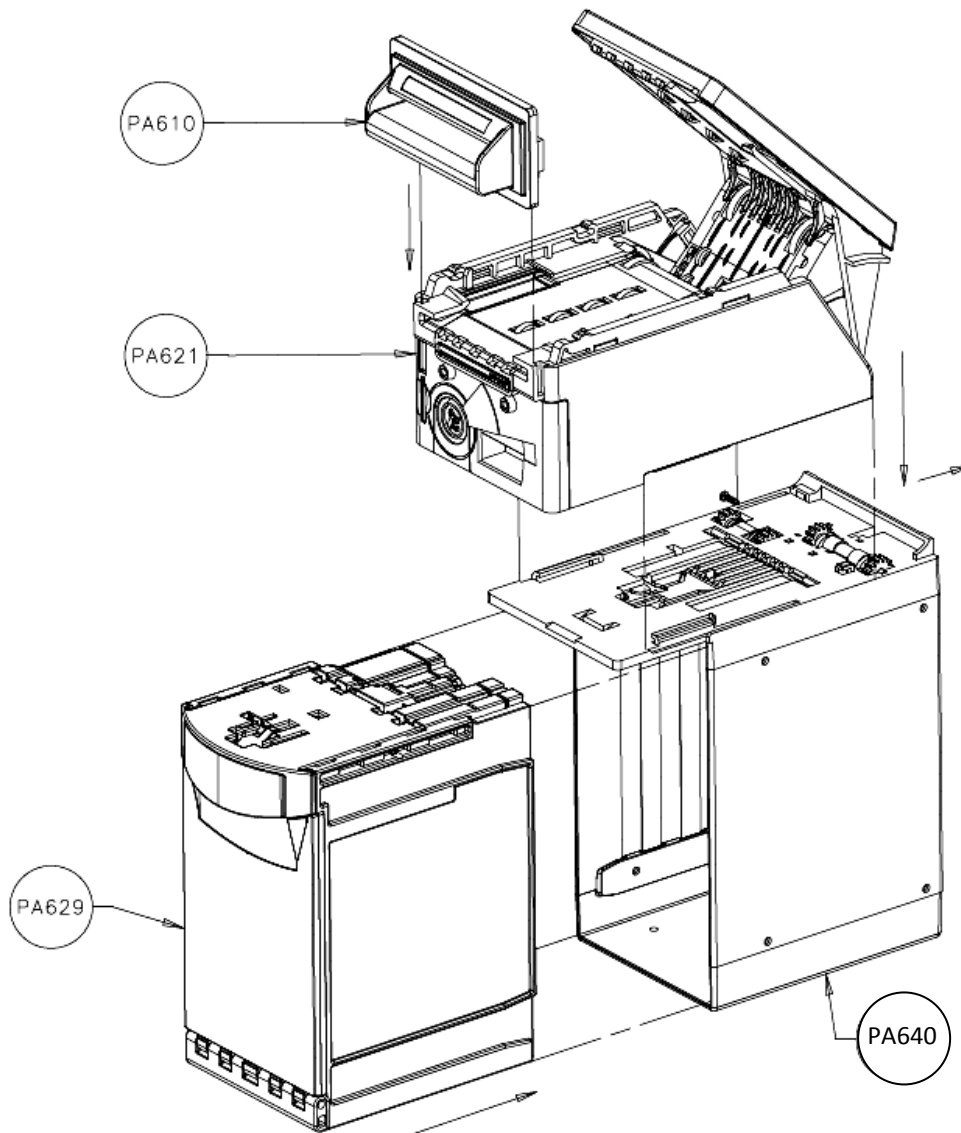
CON1 Pin 1 has two wires crimped together. CON2 Pin 15 has a crimp fitted but this is not connected.



NV200

The user can obtain the following parts for the NV200 validator:

ITL Part Number	Alternative Part Number	Description
PA610	---	Bezel Assembly
PA621	---	NV200 Validator Head Assembly
PA629	---	Cashbox Final Assembly
PA640	---	Chassis Assembly
PA650	Camlock 28D181CPA	Lock Assembly (see subsection 4.9 of this manual for lock fitting instructions)



4.10 Guidance Notes

Cleaning



WARNING!

Do not attempt disassembly

Do not attempt to disassemble the payout module or validator head – trying to do this could cause personal injury and will damage the unit beyond repair.

The payout module is effectively a 'sealed' unit; as such there are no parts to clean other than the external case. The NV200 Validator has been designed in a way to prevent damage and airborne contamination reaching the optical sensors; however, depending upon the environment the NV200 may require occasional cleaning.



Caution!

Do not use solvent based cleaners on any part of the Payout or NV200 units.

Do not use solvent based cleaners such as alcohol, petrol, methylated spirits, white spirit or PCB cleaner. Using these solvents can cause permanent damage to the units; only use a mild detergent solution as directed below.

To clean the NV200 note path, you will need to remove the validator head from the assembly – you cannot open the note path cover when the payout unit is fitted.

To remove the NV200 head unit, first unlock the NV200 cashbox and head release lock (if fitted)

Then, lift the silver head release catch located on the front of the NV200

Finally, slide the head unit forward and lift it off the chassis



After removing the head unit, to open the note path cover, pull the top cover release latch forward (towards the bezel) and lift the cover as shown here (it is recommended to also remove the front bezel to allow correct cleaning of the note path guides):



The note path is now visible and can be cleaned. Carefully wipe the surfaces with a soft lint free cloth that has been moistened with a water and mild detergent solution (e.g. household washing up liquid) - be very careful when cleaning around the sensor lenses and make sure they are clean and dry before closing the cover and restarting the unit.

**Caution!**

Do not use any lubricants.

Do not lubricate any of the note transport mechanism or any part of the note path, as this can affect the operation of the validator.

Manual Note Drive

It is unlikely that you will need to manually pay out notes from the payout module, but this can be done following the steps below (after removing the payout module from the NV200 cash box chassis). The only tool needed to carry out this process is a 5 mm Allen key.

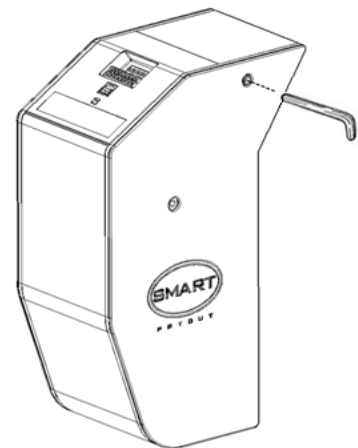


Caution!

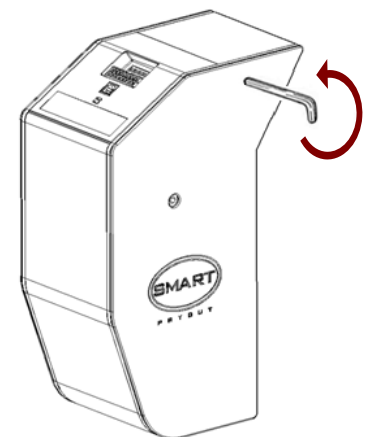
Risk of serious damage to payout module internal mechanism

If you need to follow this procedure, take great care not to over wind the mechanism or force past the dead stops – if you do the payout unit will be damaged beyond repair.

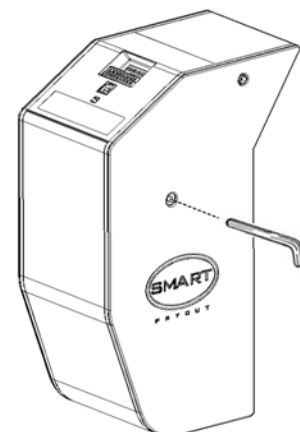
1. Locate the Allen key into the hexagonal Diverter driver



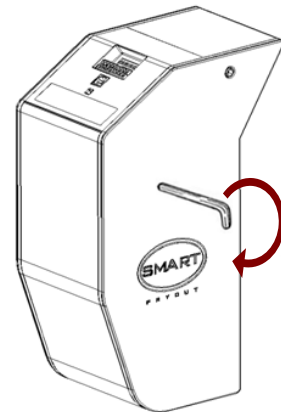
2. Move the Diverter into the transfer position by turning the Allen key anti-clockwise until it reaches the dead stop



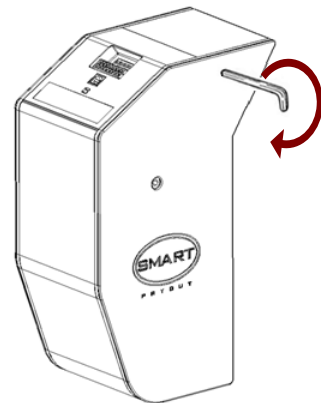
3. Locate the Allen key into the hexagonal Motor Drum driver



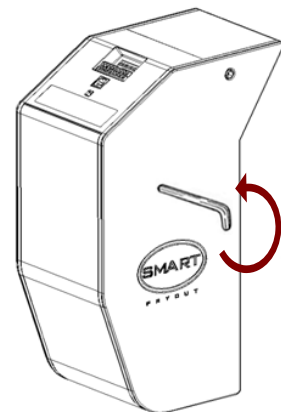
4. Transfer all the stored bank notes onto the Transaction Drum by turning the Allen key clockwise (look through the barcode window and you will see the barcode travelling towards the note exit, and the bank notes travelling into the module)



5. Once all the bank notes have been transferred to the Transaction Drum move the Diverter into the payout position by turning the Allen key clockwise until it reaches the dead stop



6. Pay out the stored bank notes by turning the Allen key anti-clockwise. You will see the barcode travelling into the Payout module and the bank notes will be paid out through the note exit



WARNING!

Do not attempt disassembly

Do not attempt to disassemble the payout module or remove the side covers to try and remove any notes inside, as the payout module will be damaged beyond repair. Always follow the procedure given above.

After removing bank notes manually, an 'EMPTY' command should be run when the unit is powered back up.

Re-Initialisation

The NV200 validator has an in-built self-calibration system that keeps the optical sensors in optimum operating condition. However if the NV200 is disassembled for any reason it also will need to be re-initialised - re-initialisation can only be carried out by ITL's technical support team.



Bezel Removal and Replacement

WARNING!
Ensure bezel is secured to validator

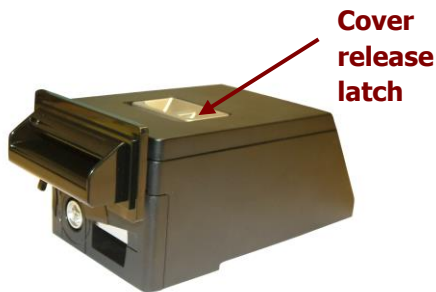
The front bezel should be secured to the validator head using screws if the SMART Payout unit is being installed and transported inside a host machine.

Information
Check bezel fixing screw length before installation.

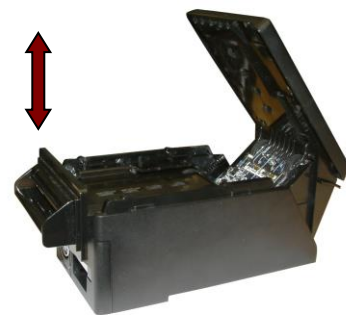
The length of the bezel fixing screws must be no more than 12 mm in length.

The bezel on the front of the validator head has been designed to be removed and refitted very easily.

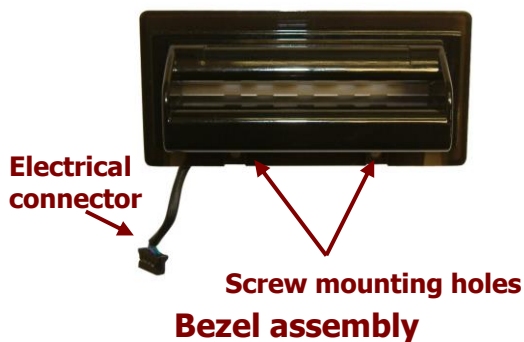
To remove or refit the bezel, access to the note path is required as described earlier in this section – the top cover must be open fully to allow access to the bezel mounting area.



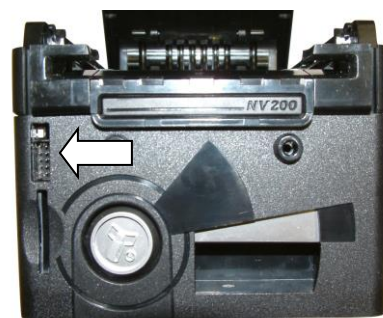
Validator note path cover



Bezel removal and fitting



Bezel assembly



Bezel connector socket



Removing the bezel: Lift the upper cover by pulling the top latch forward. If fitted, remove the two bezel securing screws and then slide the bezel assembly upwards. Finally unplug the cable from the socket on the front of the validator head.

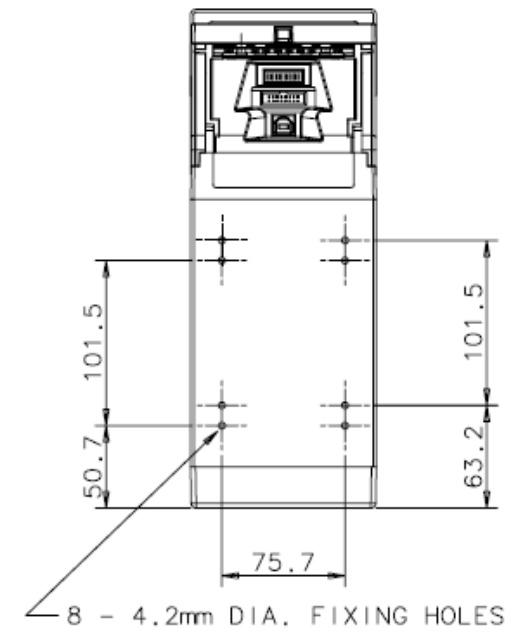
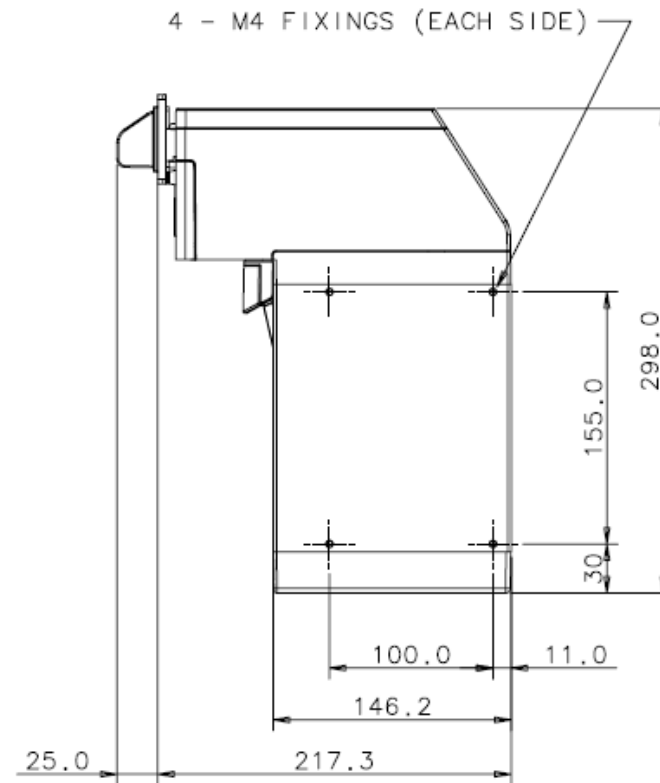
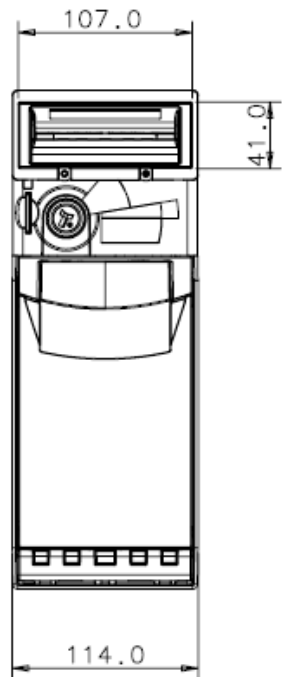
Fitting the bezel: Lift the upper cover by pulling the latch forward. Connect the cable from the bezel assembly to the socket located on the front of the validator head and slide the assembly down into place and then close the note path upper cover. If required, the bezel can be secured in place with two M3 screws - these are fitted in the two holes at the bottom of the bezel.



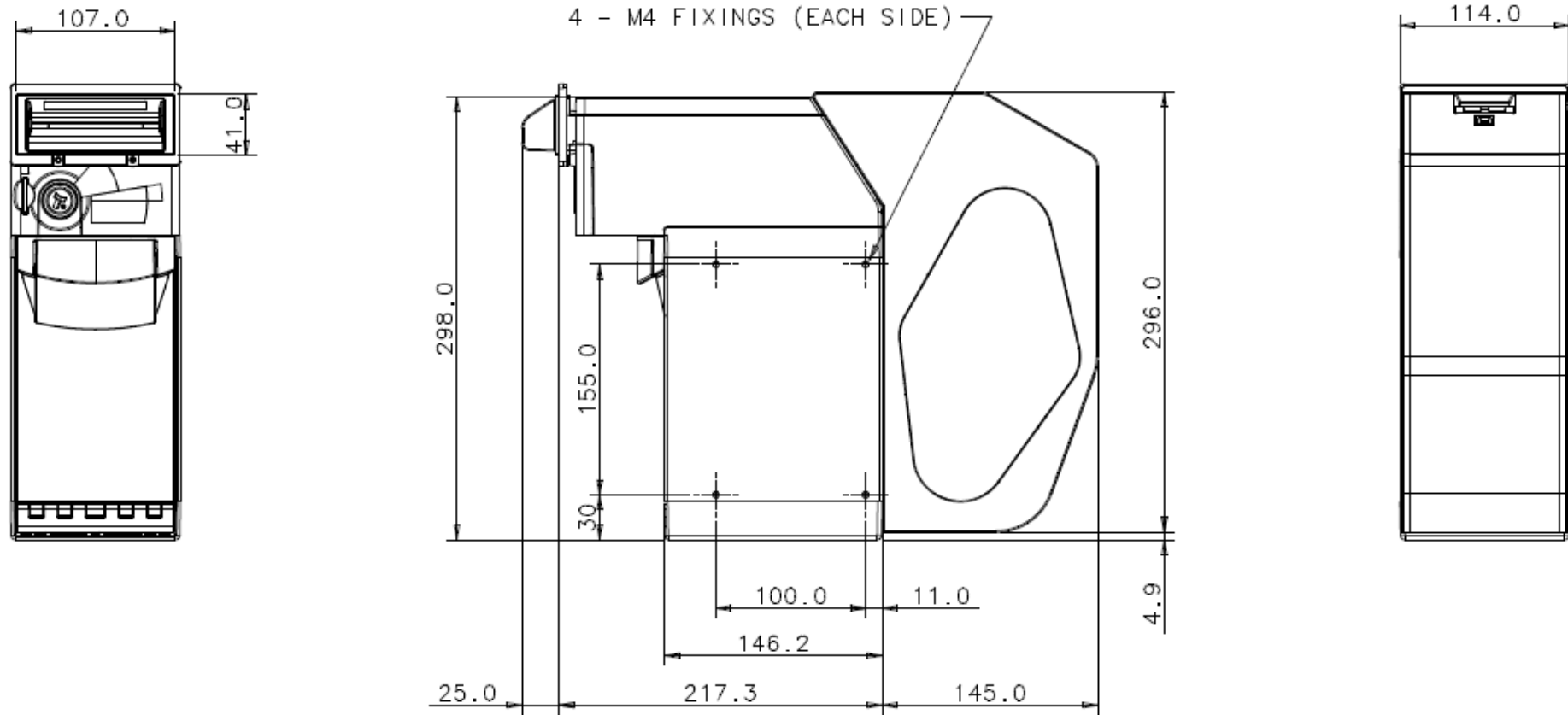
4.11 Drawings and Schematics

NOTE: If required, IGES 3D models are available on request from ITL technical support.

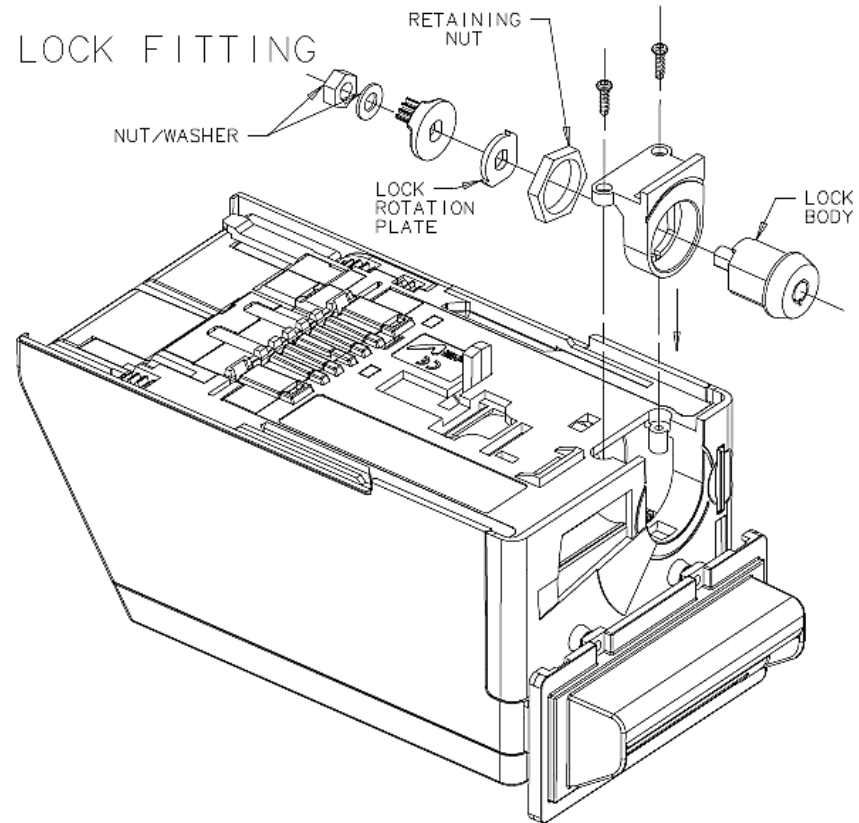
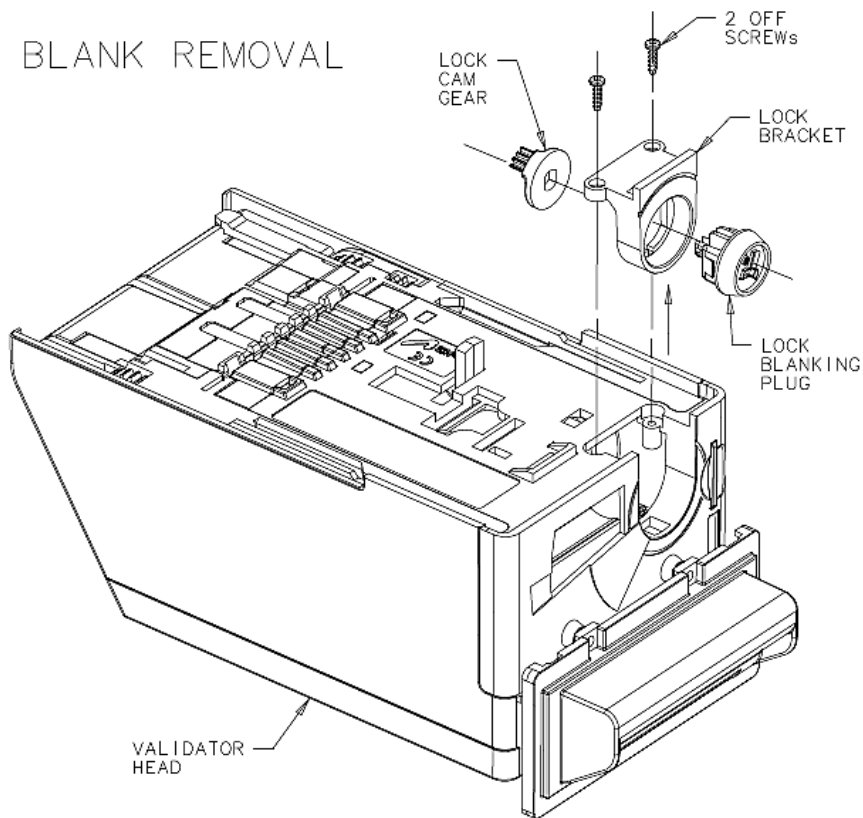
NV200 Validator:



NV200 Validator with Payout Module Fitted:



NV200 Validator Lock Fitting:

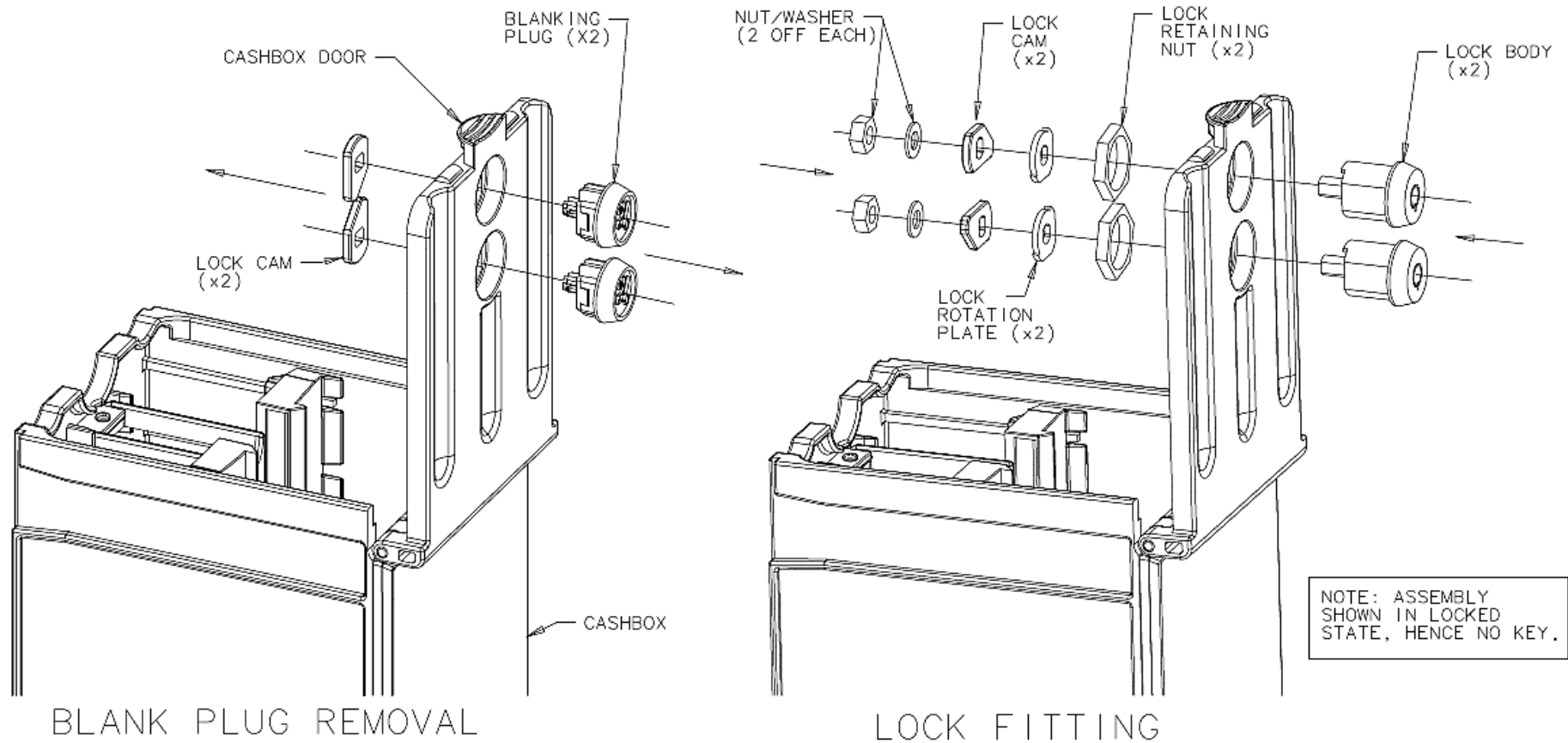


1. Unscrew the two screws (indicated) with a T8 Torx screwdriver
2. Remove the lock bracket from the validator head
3. Unclip the lock blanking plug and cam gear (keep these for use later)
4. Fit the lock into the bracket (as shown), and fix in place with the lock retaining nut

5. Place the lock rotation plate over the lock stub as shown
6. Place the lock gear cam on the lock stub and fasten with a washer and nut
7. Insert the lock key and rotate clockwise; place the assembly back into validator head and fit the screws. (finger tight)
8. When the validator is fitted to the chassis, turn the lock key anticlockwise and remove



NV200 Cashbox Lock Fitting:



1. Open the cashbox door
2. Unclip the lock cams from the blanking plugs (keep these for use later)
3. Unclip the two blanking plugs from the cashbox door
4. Fit the two lock bodies into the door recesses as shown

5. Fix the locks in place with the two retaining nuts
6. Fit the lock rotation plates in place
7. Fit the lock cams to the lock stubs as shown
8. Secure the cams with the retaining washers and nuts

4.12 Frequently Asked Questions

a. What settings should I use on the DIP switches on the rear of the unit?

- Look at the DIP switch tables in subsection 4.7

b. The payout module does not securely lock on the back of the NV200

- Make sure the plastic mountings are fitted on the back of the cashbox.
- Ensure the payout module is correctly located on the mountings before the validator head is installed.

c. My notes are always stacked in the cashbox even though I have chosen for them to go into the payout module

- Check that the Green LED on the rear of the SMART Payout unit is flashing – see the Flash Codes in subsection 4.8 if this is not the case.
- Make sure the diverter is in correct position – with the unit powered up, turn DIP switch 8 ON and OFF to make sure (check the information in Section 2, subsection 2.2 of this manual set if you are unsure).
- The Payout module might be disabled in software - send an enable payout command.
- The Payout module might be full – check how many notes are stored using your host software.
- The notes might be detected as damaged or not straight – in this case they will be stacked in the cash box so that they will not jam the payout module.

d. My payout module has stopped functioning and I want to return it for repair - however it has bank notes inside

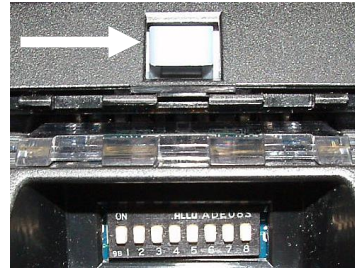
- All bank notes that are inside payout modules returned to ITL are handled with the highest security and carefully tracked internally until their return to the customer - if you do not want to ship the unit with the bank notes inside, please follow the instructions for manual payout in subsection 4.10.
- If manual payout is not possible please contact ITL technical support.



e. Is my NV200 validator compatible with the payout module?

- Early revisions of the NV200 did not support the payout module. Check for all of the following features to ensure compatibility:

A grey diverter plunger on the rear of the NV200 validator head (just above the DIP switches)



Mounting brackets on the rear of the cash box housing



Open the NV200 validator lid and check the marking on the PCB where shown in this picture – the marking needs to read **PB266_4**



If any one of these features is not present, a new NV200 validator unit will need to be purchased.

- f. Can I connect to the Host machine via USB?
- The direct USB port is for on the bench testing/Programming only. If a USB connection is desired, we recommend going through our IF17. The IF17 is a TTL to USB conversion box which filters out any noise and provides a smooth signal between the SMART Hopper and Host machine.

