



# **NV200 MANUAL SET QUICK START AND CONFIGURATION GUIDE**

**INTELLIGENCE IN VALIDATION**

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

**NV200 MANUAL SET – SECTION 1**

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## 1. QUICK START AND CONFIGURATION GUIDE

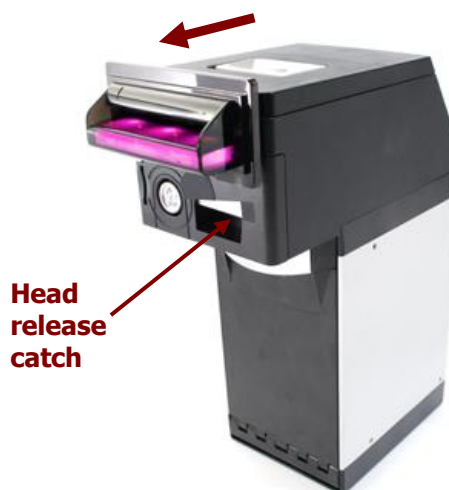
This section is one part of a complete manual set: most users should use this section of the manual - typical users are software engineers looking at how to make it work, project engineers evaluating their first unit, or installation engineers installing the unit into a host machine.

This section contains the essential information that a user needs to quickly assemble and configure the NV200 validator ready for installation into the host machine.

### 1.1 Assembly

Installing the NV200 is a simple operation, described in the steps outlined here:

1. To remove the NV200 head unit, first unlock the NV200 cashbox and head release lock (if fitted)
2. Then, lift the silver head release catch located on the front of the NV200
3. Finally, slide the head unit forward and lift it off the chassis
4. Remove the NV200 cash box from the metal chassis
5. 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.



## 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 NV200 is being installed and transported inside a host machine.



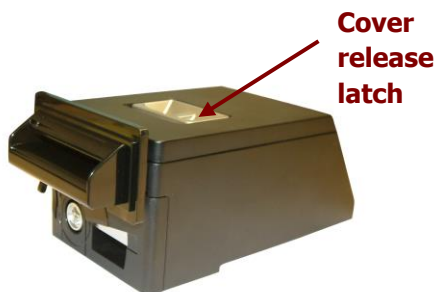
### Information

Check bezel fixing screw length before installation.

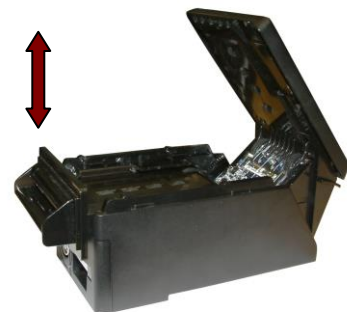
The length of the bezel fixing screws must be no more than 12 mm in length.

The bezel on the front of the NV200 validator has been designed to be removed and refitted very easily.

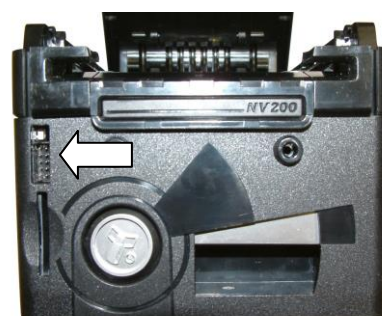
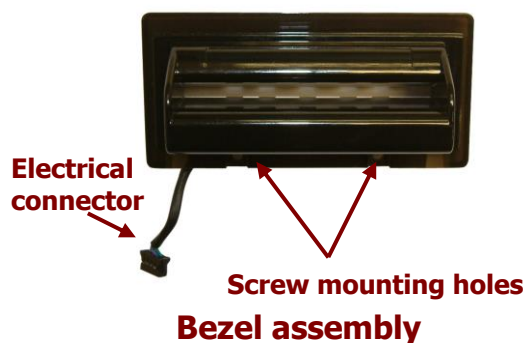
To remove or refit the bezel the top cover must be open fully to allow access to the bezel mounting area.



**Validator note path cover**



**Bezel removal and fitting**



**Bezel connector socket**

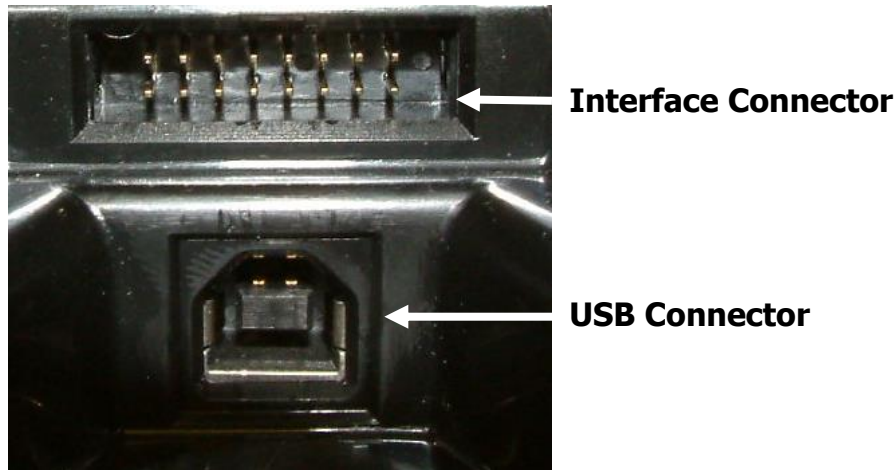


Removing the bezel: Lift the upper cover by pulling the top latch forward. If fitted, remove the two bezel securing screws and then slide the bezel assembly upwards. Finally unplug the cable from the socket on the front of the validator head.

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.

## 1.2 Panel Layout

All the connectors and switches needed to set up and interface the NV200 Validator are easily accessible on the back of the unit:



## 1.3 DIP Switch Settings

The NV200 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.

## 1.4 Connectors and Pinouts

The NV200 Validator has two connectors that are used to allow interfacing and programming.



### Information

Power always required regardless of connection type.

Power is always required on pins 15 and 16 of the 16 way connector.

The first connector is a 16 pin socket used to interface the NV200 to the host machine. The pin numbering of the socket is shown below, as well as an overview of the socket connections:



Pin	Description
6	Serial Data Out (Tx)
7	Serial Data In (Rx)
15	+ V
16	0V / Ground Connection

The USB connector is a standard Type 'B' USB socket, and can be used for interfacing to the host machine – in this case, power must be provided through the 16 way connector. The USB socket can also be used for programming the NV200 – 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.

## 1.5 Status Indicators

The NV200 Validator has two coloured Light Emitting Diode (LED) indicators that are used to show the status of the unit (red and blue) – these are located within the front bezel.

If there is a fault or other issue with the unit, the bezel LEDs will flash as described in subsection 1.8.

## 1.6 Programming

Full details on programming the NV200 Validator can be found in Section 3 of this manual set (ITL Software Support Guide).



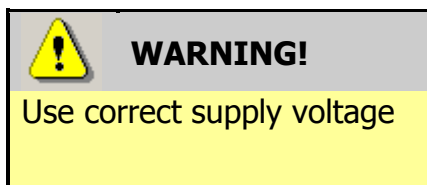
## 1.7 Technical Specifications

The full technical specifications for the NV200 Validator 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	24 V **
Supply ripple voltage	0 V	0V	0.25 V @ 100 Hz
Supply Current			
Standby	400 mA		
Running	1.5 A		
Peak (motor stall)	3 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 $\Omega$ pull-up)	0.6 V	Pull-up voltage of host interface
Maximum current sink	50 mA per output	



**\*\* NOTE:** Only the later models of NV200 are capable of using a supply voltage up to 24 V DC. Earlier versions have a maximum voltage of 13.2 V DC.

See Section 1.10 of this manual (Frequently Asked Questions) for information on how to identify if your validator supports 24V DC operation.

We recommend that your power supply is capable of supplying 12V DC at 4.3 A, or 24V DC at 2.1 A.



## 1.8 NV200 Bezel Flash Codes

The NV200 Validator has inbuilt fault detection facilities. If there is a configuration or other error the NV200 front bezel will flash in a particular sequence; a summary of the Bezel Flash Codes for the NV200 is shown below:

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

## 1.9 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 1.3 of this manual.

### b. Will my NV200 validator support 24V DC operation?

- Early revisions of the NV200 did not support 24V DC operation. Check the following to ensure compatibility:

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 PCB issue (the last digit) is lower than **4**, 24V DC operation is not supported and the NV200 validator can only be used with a 12V DC supply.

### c. NV200 will not update (I get a 'Header Fail' error)

- Make sure the correct NV200 dataset file is selected. If the problem persists, contact ITL Support for further assistance.

### d. NV200 will not update (I get a 'Data Transfer Fail' error)

- Make sure pin 9 is removed from the CN00215 ribbon cable (as shown in this image):



If the problem persists, contact ITL Support for further assistance.

e. NV200 will not update (I get a 'Non-ok' sync response)

- Check that the serial port is set up correctly and also check that the unit is using SSP with the Validator Manager software. If the problem persists, contact ITL Support for further assistance.

f. Some or all notes are not accepted

- Check that all the dipswitches on the rear of the NV200 are OFF (down), and that no inhibits are set in the Validator Manager software. If the problem persists, contact ITL Support for further assistance.

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