

# SECTION 6

## SMART PAYOUT MANUAL SET

### TECHNICAL APPENDICES

INTELLIGENCE IN VALIDATION

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



SaXXot Deutschland GmbH, Zeppelinstrasse 73, DE 81669 München  
Tel.: +49 (0)894141446-00 Fax: +49 (089) 4141446-75, [info@saxxot.de](mailto:info@saxxot.de) - [www.saxxot.de](http://www.saxxot.de)

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## 6. TECHNICAL APPENDICES

### APPENDIX A – PRODUCT APPROVALS

#### CE Marking

The SMART Payout unit described in this manual set has been designed to comply with the relevant sections of the following Harmonised European Standards:

- EN60950-1:2001
- EN60335-1:2002
- EN60335-2-82:2003

The unit complies with all the applicable essential requirements of the Standards.

#### RoHS

The following products, identified by the part numbers listed in the table below, are compliant with the European Union Directive 2002/95/EC of the Restriction of the use of certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment.

<b>Product</b>	<b>Description</b>	<b>Lead free date</b>
NV200	Bank Note Acceptor Assembly	All NV200
SMART Payout	Note Payout Assembly	All SMART Payout

We hereby declare that lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr4-6), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE), are not intentionally added to our products in amounts exceeding the maximum concentration values as defined by RoHS regulations (except where the application of any of those substances comes within the scope of the RoHS regulations exempted applications).

All compliant products are clearly marked on the product and/or packaging.

All the information provided in this statement of compliance is accurate to the best of our knowledge, as of the date of this publication being issued.



## WEEE

The European Union's directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) was adopted by the European Council and Parliament in 2003 with a view to improving the collection and recycling of Waste Electrical and Electronic Equipment throughout the EU, and to reduce the level of non-recycled waste. The directive was implemented into law by many EU member states during 2005 and 2006.



Products and packaging that display the symbol (shown left) indicates that this product must NOT be disposed of with other waste. Instead it is the user's responsibility to dispose of their Waste Electrical and Electronic Equipment by handing it over to an approved reprocessor, or by returning it to the original equipment manufacturer for reprocessing.

## APPENDIX B – TECHNICAL SPECIFICATIONS

The information contained here does not form part of a contract and is subject to change without notice. Innovative Technology Ltd operates a policy of continual product development; as such specifications may change from time to time.

### Environment:

	Minimum	Maximum
Temperature	+3 °C	+50 °C
Humidity	5 %	95 % non condensing

### Power Requirements:

(Total power requirements of the NV200 with the SMART Payout unit fitted)

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
<b>Supply Current (when connected to an NV200):</b>			
Standby			400 mA
Running			3 A
Peak (motor stall)			5 A

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).

### Logic Levels:

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



**General Specifications:**

<b>Note Sizes</b>	<b>Minimum</b>	<b>Maximum</b>
Width	60 mm	85 mm
Length	115 mm	170 mm

<b>Capacity</b>	
Storage	Up to 70 notes in Payout Module; 500 or 1000 notes in NV200
Payout	Up to 70 mixed notes

<b>Weight</b>	
Payout Module	2.6 kg
NV200	2.9 kg
Combined	5.5 kg

<b>Interface Protocol</b>	
	eSSP; ccTalk (CC2)

**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.



**APPENDIX C – GLOSSARY OF TERMS**

<b>Term</b>	<b>Meaning</b>
<b>A</b>	Ampere
<b>AC</b>	Alternating Current
<b>ACK</b>	Acknowledge
<b>AES</b>	Advanced Encryption Standard
<b>ASSY</b>	Assembly
<b>AV</b>	Average
<b>AWG</b>	American Wire Gauge
<b>AWP</b>	Amusement With Prizes
<b>BNV</b>	Bank Note Validator
<b>ccTalk</b>	Coin Controls Talk
<b>COMMS</b>	Communications
<b>CRC</b>	Cyclic Redundancy Check
<b>DC</b>	Direct Current
<b>DIA</b>	Diameter
<b>DIP</b>	Dual Inline Package
<b>ECB</b>	Electronic Code Book
<b>EEPROM</b>	Electrically Erasable Programmable Read Only Memory
<b>eSSP</b>	Encrypted Smiley® Secure Protocol
<b>FAQ</b>	Frequently Asked Questions
<b>GA</b>	General Assembly
<b>GND</b>	Ground
<b>Hz</b>	Hertz
<b>ITL</b>	Innovative Technology Ltd



<b>Term</b>	<b>Meaning</b>
<b>LED</b>	Light Emitting Diode
<b>mA</b>	milliampere
<b>max</b>	maximum
<b>MDB</b>	Multi Drop Bus
<b>min</b>	minimum
<b>mm</b>	millimetre
<b>ms</b>	millisecond
<b>MOD</b>	Modified (or Modification)
<b>NV</b>	Note Validator
<b>PCB</b>	Printed Circuit Board
<b>PDF</b>	Portable Document Format
<b>PIPS</b>	Pay-in Pay-out System
<b>PROM</b>	Programmable Read Only Memory
<b>PSU</b>	Power Supply Unit
<b>QTY</b>	Quantity
<b>RAM</b>	Random Access Memory
<b>ROM</b>	Read Only Memory
<b>Rx</b>	Receive
<b>RoHS</b>	Restriction of the use of certain Hazardous Substances
<b>SIO</b>	Serial Input Output
<b>SSP</b>	Smiley® Secure Protocol
<b>SWG</b>	Standard Wire Gauge
<b>SWP</b>	Skill With Prizes
<b>SYNC</b>	Synchronize





<b>Term</b>	<b>Meaning</b>
<b>TTL</b>	Transistor Transistor Logic
<b>Tx</b>	Transmit
<b>USB</b>	Universal Serial Bus
<b>V</b>	Volt
<b>V_In</b>	Voltage In
<b>WEEE</b>	Waste Electrical and Electronic Equipment



## APPENDIX D – ORDERING INFORMATION

The following information is required to order a SMART Payout unit:

<b>Product</b>	SMART Payout	Consists of NV200 validator, cash box chassis and payout module
<b>Dataset</b>	Country code and variant	Alternatively supply details of the currency and note types you wish to use
<b>Bezel Size</b>	85 mm	This is the only bezel size available for SMART Payout
<b>Bezel Colour</b>	RGB code or text description	
<b>Cash Box</b>	500 or 1000 note capacity	
<b>Interface</b>	eSSP or ccTalk	

