

For more information please contact support@innovative-technology.co.uk

Bank Note Validator Currency Manager 3.3.12 released

BNV Currency Manager is now at version 3.3.12 and available to download from the Support Download section of our website within Support. This latest version supports new products and new features and it is strongly advised that all customers update their BNV Currency Manager to this latest version. Please ensure any old versions are removed before installation of version 3.3.12.

New features include:

- Support for eSSP
- Support for ccTalk DES
- Support for NV11 (Note Float)
- Support for ccTalk variants
- More features when setting NV200 options
- SSP Check Notes events updated for new units
- ccTalk checker tool supports Barcode ticket
- Modifying files for older validator (.CV9 files) will now have correct checksum
- COM port number is now unlimited

NV10 firmware 3.24 released (NV10 dipswitch only)

Firmware 3.24 has been released for the *standard NV10 validator (with dipswitches)*. New features include, increased security and acceptance of GBP £20 note. This firmware is available to download from our website within Support / Firmware Download / NV10 and it is recommended that all units be updated.

NB: This firmware relates to old style NV10 validator only (with dipswitches).

BV20 firmware 4.07 released

BV20 firmware 4.07 has been released – all datasets have been updated and are available to download from our website within Support / Currency Download.

New features include

- ccTalk® DES encryption
- Pulse interface: single line inhibit option
- Improved acceptance with window notes

Change to UK 5p and 10p coin composition

The planned introduction of new nickel-plated steel 5p and 10p coins in the UK (which was due April 2011) has been postponed until 1st January 2012. An HM Treasury spokesman said: "The implementation date of the change in composition has been moved back to January 2012, which will give affected industries sufficient time to update machinery and software to accept the new coins."

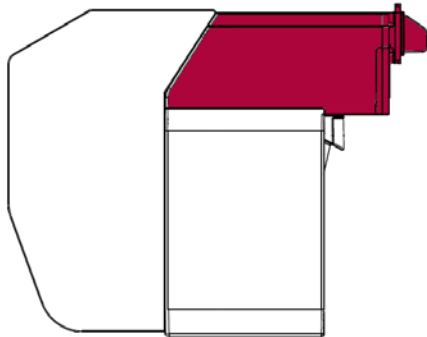
SMART Payout firmware 4.08 released

This latest firmware allows the Payout unit to be updated via the NV200 using a single download file. Please contact your local technical support team to obtain these files. Please refer to the SMART Payout Update article on the next page for further details.

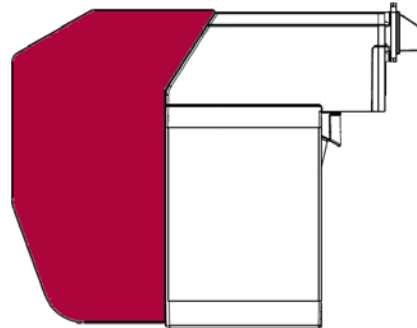
SMART Payout Update

The SMART Payout system can be broken down into 2 sections below. Here we will refer to them jointly as “SMART Payout system” and separately as NV200 and Payout.

1. The NV200 validator



2. The Payout unit on the rear



Until now, these sections needed to be updated separately. With the release of firmware version 4.08, the NV200 will update the firmware on the payout module once it has been updated.

The update can be done using the latest version of either PIPS or Validator Manager software. The connection to the validator can be either USB or TTL.

During the update, the bezel will display 3 states:

1. Blue Flash []

Indicates the NV200 validator is being updated with the firmware.

2. Green []

There is about a 5 second pause before the payout module is updated.



Caution: Do not disconnect the power or data connection or separate the NV200 head from payout module at this point. Doing so could cause the unit to become un-usable.

3. Green/Blue [ / ]

NV200 is transferring and installing update in payout module.



Caution: The same precautions should be taken as described above. Any interruption in this process could result in an un-usable unit.

Once the payout module is successfully updated the whole SMART Payout system will reset.

Newly released datasets – February 2011

Name	Code	Reason	Validator
China	CNY02/03	Improved acceptance	NV200
Chile	CLP01/02	Improved acceptance	BV20
Colombia	COP05	New release	NV9 USB
Denmark	All	Improved acceptance New 500 note added	NV9 / USB
Honduras / USA	HNL10	New release	NV9USB
India	All	Improved acceptance	NV10 / USB
Israel	ILS01	New release	SMART Payout
Israel	ILS01	Improved acceptance	NV200
Kazakhstan	KZT01	New release	SMART Payout
Nigeria	NGN01	Improved Security	NV9 USB
Romania	All	Improved acceptance	NV9 / USB NV10 / USB
Serbia	RSD01	Improved acceptance	NV200
Serbia	All	Improved acceptance	BV20
Taiwan	TWD01/02	Improved acceptance	BV20
Thailand	THB01	New release	BV20
Uganda	UGX02/01	New release / New notes added	NV200
Venezuela	VEF01	Improved acceptance	NV9 / USB

ccTalk® DES

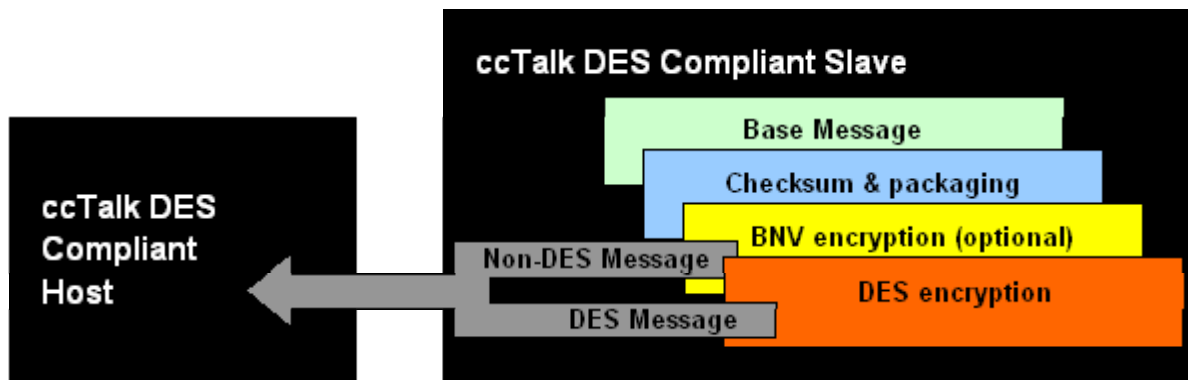
In response to manufacturer and operator demands for a more secure method of communicating with peripherals (bank note validators, hoppers, coin mechs etc); DES has been implemented in ccTalk® communication protocol.

Overview

DES stands for Data Encryption Standard and was developed by IBM in 1974. It uses a shared key that is known by both the host (e.g. gaming cabinet) and the slave (e.g. bank note validator). In the ccTalk® implementation of DES, a 64-bit key has been used.

Compared to the currently existing ccTalk® encryption standards, significant processing power is required to encrypt and decrypt messages. On older systems this could impact the operation of the machine if a delay is incurred on every packet. Therefore DES encryption is only used when obtaining the monetary value of each channel and the confirm changes to the events reported by read buffered bill events.

The existing ccTalk® encryption algorithms and packing standards can be used in conjunction with DES encryption, indeed it is advisable to do so as only limited packets are encrypted using the DES method. This diagram shows the layers of processing that combine to construct a ccTalk® response from a peripheral.



Installing a DES Compatible Validator

Each validator needs to be enabled for the DES variant of ccTalk® protocol before it will work in a DES compatible host. ITL validators can be ordered DES compatible but these will *not work in a non-DES compatible host* without disabling the DES compatibility. See below for details of identifying DES compatible validators.

Each validator has its own unique 64-bit key which is set during manufacture at Innovative Technology LTD. It would not be feasible for an engineer installing the validator to enter this key to the host. Therefore it is possible, with physical access to the validator, for the host system to request the key. This can only be done in 'trusted mode'. Please refer to the product manual for details regarding how to enter trusted mode. Once the validator has sent the key to the host it is possible for DES encrypted communication to take place. This only needs to be done once on installation, however, **any time** a different validator is installed in the system, the key exchange will have to take place.

Identifying a DES Compatible Validator

All validators programmed at Innovative Technology as DES compatible variant of ccTalk® will be identified with [DES] printed on the interface label, as shown below.



Innovative Technology LTD products support DES using the following firmware versions:

Product	Firmware Version	Release Date
NV9	Not Yet Available	
NV9USB	3.29	2010-11-02
NV10	Not Yet Available	
NV10USB	Not Yet Available - Due April 2011	
NV11 (w. Note Float)	3.31	2010-12-16
NV200	Not Yet Available - Due April 2011	
SMART Payout	4.08	2011-02-08
SMART Hopper	6.08	2011-01-25
BV20	4.06	2011-01-28
BV50	Not Yet Available - Due April 2011	
BV100	Not Yet Available - Due April 2011	

If DES is not enabled when you receive a validator or an existing validator needs updating, follow the instructions below.

Checking and Changing DES Compatibility

Firstly, ensure the firmware is up to date.

The DES compatibility can be toggled on/off using Validator Manager version 3.3.12 or later. On the menu select Tools – Set Validator Options. On the General Options tab, the “cct DES encrypted” checkbox will be available when ccTalk® (CCT) interface is set. This is shown below. Click Apply Changes once the validator is configured as required.

The screenshot shows the 'BV Target Settings' dialog box with the 'General Options' tab selected. The 'Interface' list is set to 'CCT (ccTalk)'. The 'cct DES encrypted' checkbox is checked and highlighted with a red box. Other options include 'cct BNV encrypted' (checked) and 'cct unencrypted' (unchecked). The 'Update Changes' button is visible at the bottom.

General Options

Target Details | Dataset Settings | cctalk Settings | MDB Settings

Update Changes

Strim Function Enabled
 Enable Program Card Function
 Give credit after safe Jam

Disable Escrow reject detection

100 Pulse high (ms)
50 Pulse low (ms)
1 Pulse multiplier
0 Pulse low (ms) (Parallel)

SSP Address
0

Validator Specific Channel Inhibits
1 8

9 16

These inhibits are validator specific and are unrelated to Inhibits set in the dataset (as set on the "Dataset settings" tab). They will be preserved if a new BV file is downloaded to the validator

After update, the interface will be:

Interface

- SSP (Smiley Serial Protocol)
- PAR (Parallel)
- PL1 (Pulse Mode 1)
- SIO (Simple Serial)
- CCT (ccTalk)
- MDB (Multi-Drop Bus)
- SP4 (N/A)

cct DES encrypted
 cct BNV encrypted
 cct unencrypted

Disable Escrow time-out
 Disable PSU Monitor

Exit | Apply Changes