





Implementation mandatory		Implement on affected units	
Implementation optional		Technical Message	
<b>Product</b>		<b>Module</b>	
<b>Issue</b>	02	<b>Status</b>	Released
<b>Issued</b>	TSG	<b>Date</b>	2010-05-10

**Subject:** NMD050 FW 2019-02.08

***Changes in version 02: Implementation data added***

## Details

- **Improved communication**

When using a non handshake communications cable the communication was lost if the cable was pulled out and the NMD had to be power cycled to restore communication.  
Corrected so that the communication is restored without a need of power cycling.

- **Improved check of Denomination data**

If the cassette is pulled out during RD/9X27, 9X28, 9X29 wrong currency code could be reported.  
To overcome this scenario the reply data is checked and cross referenced.  
If it is not possible to fully read out the denomination data X'38'Illegal Command will be set.  
To fully benefit it is recommended to use NFC fw 2006-05.03 in combination with CMC fw 2019-02.08.

- **Improved Main Motor stop sequence**

Previously there was a risk that the machine could report X'46' Main Motor Failure if the machine transport speed was decreased rapidly. To avoid this an improved check of the transport clock value is Implemented.

- **Improvement of the Main Motor start up sequence**

To avoid any unnecessary X'46' – "Main Motor Failure" statues the start up sequence is fine tuned.

Start up current is increased

Wait time after start until the main motor current is regulated is increased with 20ms.

During start up the Main Motor speed is regulated every 20ms instead of every 10ms.

- **Improvement of the pressure update in the Note Cassette on cassette close**

On close cassette the pusher plate is moved backwards approx. 20mm and after the close is completed the pusher plate is moved forward again to gain the correct pressure in the cassette. If a "Low Level" state was set to the cassette this pressure update was not done.

Now corrected so that the pressure update after Close Cassette is done when Low Level is set to the cassette.

- **Improved Double Detect calibration**

If the NMD is polled constantly an "X'43' – "Jam In Note Feeder Transport" could be reported upon a "X'32' – "Move Forward" command.

The frequent polling interferes with the Double Detect calibration task.

To avoid this, the Double detect is calibrated prior to every X'32' – "Move Forward" command.

- **Wrong Currency and Denomination in the Cassette**

Currency and denomination is read with item 9X27 (X is the FeederNumber)

This command needs an authorization code to be read out of the cassette, this code is set when the cassette is inserted into the NMD or on power up. If an error is detected with the communication to the cassette during operation, a reset of the cassette is made.

This will clear the authorization code in the cassette and the command 9X27 will not receive any answer from the cassette it selves, the answer in this case will be picked from the CMC internal buffer from the previous 9X27 commands (could also be the answer from previous 9X28 or 9X29 commands).

- **Command ‘GA’ – “Send Self Test Data” translates wrong cassette code**

If a Cassette was not coded as per our recommendations the GA command would translate the cassette coding, example: USD101\_ would be translated to USD012\_.

This is now corrected so that an incorrectly coded cassette is not translated in the GA reply and states the actual information set/coded to the cassette.

- **Improved communication buffer clear**

When polling data from NMD during power on/off the reply string could become out of sync after power on. To improve this RX-buffer is cleared when RTS signal is received.

Note: No commands should be sent before the NMD has finished its start up sequence and is in operational mode. LED on CMC board will start flashing when start up initialization has been made and NMD is ready to receive commands.

- **Improved Change Over handling – Item 127**

To improve the Change Over method enhanced cross checks are made between Note Cassette coding and internal memory data. The internal memory will be checked and cross referenced against data in Note Cassette coding. If data values are not equal internal memory will be updated with data from the cassette coding. It is now possible to send X’32’ Move Forward to a hopper that has Empty Cassette status if another cassette has the same denomination coding in another hopper.

- **Change to Data Item 225 – Cassette Inserted Indicator**

Cassette inserted indicator set by default “on/ enabled”

- **New Data Item 233 – Number of notes between Note Feeder scrub**

Specifies how often the automatic scrubbing of the Note Feeder roller is done.

The scrubbing is made on a Close Cassette command and after the specified nr of notes set by this item, the default value for this item is 2000.

See Communication & Command Reference Manual 8030704-8 for full details.

- **New Data Item 235 – Max Feed retries**

Set number of Feed Error recovery retries before X'36' Feed Failure is reported.  
Number of retries can be set between 1-5, default value for this item is 5.

- **New Data Item – 250 Default Parameters**

WD/250/0 will set all parameters to factory default.  
For full descriptions of default settings see Communication & Command Reference Manual 8030704-09.

- **New Data Item - 321 Number of Notes delivered / single rejected per feeder**

RD/321/N  
N = Feeder Number 1 – 8  
Example:  
RD/321/1 gives totals for the NQ feeder (10/10/10)  
WD/321/0 clears the data for all 8 feeders.

- **New Data Item - 323 Number of Notes delivered / single rejected per feeder**  
**Same as data Item 321 but with all feeders in one command**

For full description please see Communication & Command Reference Manual 8030704-09.

## Compatibility

FW 2019-02.08 is fully backwards compatible with older versions.

## Documentation change

Old Document	New Document	Part number	Description
8030704-08	8030704-09		Communication & Command Reference Manual

## Implementation/release

**Date:** 2010-05-06

**Serial No:** 1012202

## Installation

Firmware 2019-02.08 is available for download at [www.talarisoemextranet.com](http://www.talarisoemextranet.com)