No	Item No.	File Name	Release Date	Device	Country	Comm. Protocol
		Commentary				
1	**BB-EUDK1180**	FL-EU7DK5AAJ1-1.80-BB.hex	04/05/13	BB	Europe Denmark	CCNET

1. Processing of new 5 EUR to be issued in 2013 has been introduced.
2. Performance improvement to 5, 10, 20 and 50 EUR.
3. Processing of new 500 DKK and 1000 DKK issued in 2011 has been introduced.
4. BB statistics in new format has been introduced.
5. During packing BB tries to reject a bill rather than reports one of the
following errors: A8, B5, C2 or E5.
This modification allows to prevent jams inside BB switch.
6. Jam recovery during Unload has been introduced: after jam in lower tract
of BB chassis during unloading operation BB returns jammed bill back
to corresponding cassette and try to unload the same bill again.
This feature has been implemented for 0xE1, 0xE2, 0xE3, 0xE4,0xE5, 0xE6
 error codes.
7. Jam recovery during Dispense has been introduced: if time-out of bill
arriving to the input sensor of dispenser (error code 0xD4) is detected then BB
returns jammed bill back to corresponding cassette and try to dispense the same
 bill again.

| 2 | **BB-EUDK1167** | FL-EU7DK5AAJ1-1.67-BB.hex | 12/03/10 | BB | Europe Denmark | CCNET |

1. Processing of new 200 DKK issued in 2010 has been introduced.
2. Acceptance of 100 DKK has been improved based on the latest samples of
street grade bills.

| 3 | **BB-EUDK1165** | FL-EU7DK5AAJ1-1.65-BB.hex | 08/12/10 | BB | Europe Denmark | CCNET |

1. Processing of new 100 DKK issued in 2010 has been introduced.
2. Processing of EMPTY DISPENSER command has been modified to prevent false
 credit report in non-applicable states.
3. During packing BB tries to reject a bill rather than reports one of the
 following errors: A8, B5, C2 or E5. This modification allows to prevent
 jams inside BB switch.

| 4 | **BB-EUDK1163** | FL-EU7DK5AAJ1-1.63-BB.hex | 03/24/10 | BB | Europe Denmark | CCNET |

1. Processing of new 50 DKK issued in 2009 has been introduced.
2. FEED LEVEL capability has been introduced.
3. Commands SET CASSETTE CAPACITY LIMIT and GET CASSETTE CAPACITY LIMIT
 have been added to CCNET.

| 5 | **BB-EUDK1159** | FL-EU7DK5AAJ1-1.59-BB.hex | 04/02/09 | BB | Europe Denmark | CCNET |

1. Acceptance of 50 DKK has been improved based on the latest samples of street
 grade bills.
2. Diagnostic command has been introduced (see MAN_CCNET d7 Rev.2.5.1).
3. Problem with barcodes stacked to the Escrow cassette (must be packed into
 drop box only) has been fixed.
4. If drop box is removed over dispensing then BB suspends dispensing and
 reports BOX REMOVED, dispensing will be resumed after drop box replacement.
5. Country code has been replaced with currency code in all internal tables.
6. Point of reporting "Waiting for bills to be removed" (0x1D 0x01) state during
 dispensing has been changed from the moment when BB starts moving
 the last bill to be dispensed from recycling cassette to dispenser to
 the moment when the last bill to be dispensed enters the dispenser.

| 6 | **BB-EUDK1153** | FL-EU7DK5AAJ1-1.53-BB.hex | 02/06/07 | BB | Europe Denmark | CCNET |

First release:

Commentary

1. Metal bezel support.
2. Barcode recognition.
3. Jam (credit loss) prevention.
4. Chassis soft download via CCNET.
5. Improved short bill returning.
6. Pass sensor's processing during bill packing has been improved
   to prevent rejection of single bills.
7. 'SET OPTIONS' and 'GET OPTIONS' commands have been added to CCNET.
8. Processing of the following options has been implemented:
   'LED BV INHIBIT' -> 0 - LED is red in BV_INHIBIT state; 1 - LED is turned off
   'KEEP BILL' -> 0 - bill will be dropped after returning;1 - bill will be held
   'LOOK TAPE' -> enhanced processing of pass sensor (0 - OFF, 1 - ON)
   'TURN SWITCH' -> switch turning after bill packing (0 - OFF, 1 - ON)
9. Loss of cassette setting "Not Assigned" after RESET has been eliminated.
10. Control of triangle wheel in metal bezel during bill accepting has been
    improved to prevent the bill sticking.
11. Control of thermo heater in metal dispenser has been added.
12. Enhance the algorithm of BB self-testing: if cassette(s) is(are) removed,
    software has to skip the algorithm of "device recovery after POWER DOWN"
    and turn to the regular self-testing.
13. Set higher priority to the indication of "BOX REMOVED" state.
14. Make "RECYCLING CASSETTE STATUS" request accessible only in IDLING,
    DISABLED, ESCROW states (according to "CashCode NET" description).
15. Do not erase an IDENTIFICATION NUMBER of BB unit in statistics after
    download to the validating head the software designed for another country.
16. BB power recovery feature has been introduced.
17. Nonvolatile counters for counting all dispensed or unloaded bills have been
    added.
18. Commands "POWER RECOVERY", "EMPTY DISPENSER", "EXTENDED CASSETTE STATUS"
    have been included to CCNET.
19. Size of the transparent window on the banknote has been brought in to be
    taken into account during transporting of the bill.
20. Errors related to setting date/time from B2B keypad in Service mode
    have been fixed.
21. The following error has been fixed: if remove a cassette from the chassis
    BB keeps trying to pack bills to that cassette.
22. "GET STATUS" command is enable only in IDLING and DISABLED states
    according to CCNET specification.
23. Error with displaying of "Not Assigned" state for recycling cassettes
    in Service mode has been fixed.
24. Prohibit switching to download mode in the following error states:
    ERROR_LINK_SENS_HV, ERROR_MAGN_SENS_HV and ERROR_OPT_SENS_HV.
25. Prohibit performing software RESET in the following error states:
    ERROR_LINK_SENS_HV, ERROR_MAGN_SENS_HV and ERROR_OPT_SENS_HV.
26. Add "READ BB-DEVICES SERIAL NUMBER" command to CCNET.
27. Remove the control of stand-by battery.
28. Fix for unload in case when some bills were manually removed from
    the cassette has been implemented.
29. BB turns to IDLING through chassis reinitialization after the following
    sequence: drop box removal, chassis removal, then chassis replacement
    and drop box replacement.
30. The keeping of correct BB statistics has been brought in (failure counters).
31. The improved algorithm of drop box initialization has been implemented
    in order to make sure that BB is always able to determine if drop box is
    completely attached.