

Operation Manual

Диспенсер купюр V-1000



SENSIS Kiosk Components

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1. Guide to Key(Switch) Usage



RESET Key

- (1) Reset Hardware
- (2) Used to enter into "SETUP" MODE by pressing it with FAC Key
- (3) Used to escape from "SETUP" Mode.

FAC Key

Used to enter into "SETUP" MODE by pressing it after "RESET" Key.

START Key

By pressing START Key, it dispenses bills of the Q'ty as many as set in the SETUP Mode.

CLEAR Key

- (1) It clears error messages.
- (2) By pressing it longer about 3 seconds, it clears the number dispensed/cumulated.

Specification	
Dispensing Speed	700 notes / minutes
Upgrade	Download from PC
Error Messages	Half, Chain, Short, Jam, Double
Interface	RS-232C
Cassette Capacity	1,000 / 2,000 notes (Can be different depending on note thickness)
Note Size Range	100~170mm (W)
Demension	220mm(W) x 200mm(D) x 150mm(H)
Net Weight	Appr. 5Kg
Power	DC +24V

2. Brief Operation Procedure

1) Ready Mode

When the power is ON, the LED display shows Version No. for one second, and it goes to READY MODE which is the ready status to dispense.

When START key is pressed, the set number is dispensed and accumulated to the dispensed number.

When CLEAR key is pressed for more than 3 seconds, the accumulated number is erased.

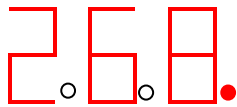
The START & CLEAR key pressing can be disabled by USART commend.

If the accumulated number on the display is reached to 4000, the number can't be increased any further.

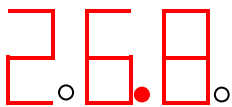
If an error is occurred, its error message and the counted number is flushing in turn on the display.

The numbers more than 999 are displayed as the following method, using the period LED.

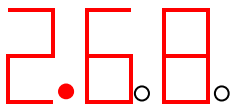
1268



2268



3268



2) Before Getting Started

Before getting started, please select denomination first, which can be selected at the Setup Mode. For Euro notes, 5/10/20 Euro seldom cause any errors even though it is setup as 5 Euro, but for more perfect accuracy and not to cause DB error just in case, it is recommended to select a denomination that you want to use for the dispenser.

*** Note: Denomination selection is done at Mode "D"; which are explained below.

3. Setup Mode

- How to enter into SETUP mode: after pressing RESET key, instantly press FAC key in a second,.

- How to return to READY mode from SETUP mode without saving changes: press RESET key , it goes to READY Mode **without saving** anything that you changed in Setup Mode.
- How to return to READY mode from SETUP mode **after saving** all the changes in Setup Mode, come to S-Mode and press START Key.

1) IR Sensor Setup Mode

When you enter into SETUP MODE, the first Mode is IR Sensor Setup.

Without any paper inside the path, the value should be 10(+5). With IR setting paper inserted, the value should be adjusted to 105(+5).

*** Note: IR Setting Paper is a special paper provided by XTM, to adjust IR value.

By pressing START Key, it's to setup IR sensor Right Value,
 By pressing FAC Key again, it's to setup IR sensor Left Value.
 START Key → FAC Key → START Key: these two keys are shift key from one to the other. To finish/move out of the IR setting Mode, press CLEAR Key, and it moves to the next mode, "C" Mode.

- o. start key ---> ir right val(r: display indication)
- o. fac key ---> ir left val(l: display indication)

*** Note: in case that the value is over 100, the initial r & l are not displayed.

*** Note: To save the value changed, you need go to "S" mode to save the data.

2) MODE "C" : ID Number Setup

By pressing CLEAR Key from the IR SETUP MODE, it moves to MODE "C".
 In case of using multi dispensers in a system, this mode can setup unique ID number on each dispenser. The available ID numbers are 0~99. When the ID is setup, all the commend should include this ID number. The ID number is not identical in commend, dispenser can't be operated.

By pressing START Key, the number goes up.
 By pressing CLEAR Key, the number goes down.

*** Note: In case of commend not working, you may check ID number.

*** Note: To save the value changed before coming out of the Setup Mode, please ensure that you need to go to "S" mode to save the data. If you don't want to save the value or made a mistake in value changing, just press RESET key to escape from the SETUP Mode without saving.

3) MODE "D" : Denomination Selection

MODE "D" is for denomination selection. To avoid any errors, please set the denomination before getting started. In case of a dispenser with multi denominations, you have to select one of the denominations before getting started using/testing the dispenser.

Display	Denomination Indication
d.r1	50 Ruble
d.r2	100 Ruble

4) MODE “E”: SETUP Regular Dispensing Quantity .

In the MODE “E”, when you set the dispensing number, whenever pressed Start Key one time, it dispenses the Q'ty that you setup in this Mode. Ex) In case you setup it as 4, it dispenses 4 pcs when you press the START Key.

By pressing START Key, the number goes up.
By pressing CLEAR Key, the number goes down.

*** Note: The regular dispensing number can be set as 1~10, but extendable by revising our software.

*** Note: To save the value changed before coming out of the Setup Mode, please ensure that you need to go to “S” mode to save the data. If you don't want to save the value or made a mistake in value changing, just press RESET key to escape from the SETUP Mode without saving.

*** Note: If the regular dispensing number was set as 4, when you pressed Start Key where there is no notes in the bill container, it displays the message “Sob” with –4.

5) MODE “F”: SETUP Double Reference Value .

With MODE “F”, double reference value is automatically linked with denomination/currency that you selected on Mode D.; which indicates the dispenser detects Double notes based on this Ref. Value. Please don't change it without our engineer's instruction.

Denomination	Default Double Ref. Value	Remarks
d.r1	30	50 Ruble
d.r2	30	100 Ruble

In case of problem with detecting doubled notes, you may change the value according to our instruction.

By pressing START Key, the number goes up.
By pressing CLEAR Key, the number goes down.

6) MODE “H”: Dispensing Test Mode

In this mode, it proceeds self-testing: dispensing and clearing count-number.
(The Q'ty is not saved in the accumulated number.)

By pressing START Key, it tests dispensing.
By pressing CLEAR Key, it tests clearing count-number.

7) MODE “I”: Motor Self-Test Mode

In this mode, it proceeds Motor operation test.
By pressing START Key, the Motor tests turning by itself for 2 seconds.

By pressing CLEAR Key, the Motor tests reversely turning by itself for 2 seconds.

*** Note: While the motor turns, if there is no encoder signal, the display shows Error Code: E02.

8) MODE “J”: Communication Status Checking (USART Check)

This mode is to check communication status between the dispenser and the host computer.

Insert CTM (Communication Testing Module) into the RS-232 Port, if the status is on normal working, it displays “ok”, and if it’s on abnormal status, it displays Error Code: E03.

*** Note: CTM is a device provided by XTM.

9) MODE “S”: Save Changed Setup

This mode is to save the changed setup in every Mode.

To return to READY mode from SETUP mode **after saving** all the changes in Setup Mode, come to S-Mode and press START Key.

Saving setup change: Ready Mode → RESET+FAC → Setup Mode(Change Setup) → S-Mode → Press RESET Key → Ready Mode

Without Saving: Ready Mode → RESET+FAC → Setup Mode(Change Setup) → () → Press Reset Key → Ready Mode

*** Note: If you made some mistakes in change of setup, you may just escape from Setup Mode without saving in MODE “S”.

4. Error Messages

XC-1000 Error Messages		Remarks
Message	Indication	
JAM	Jam Error	
SH	Short Error	
HF	Half Error	
CHN	Chain Error	
DB	Double Error	
Nob	Shortage of bills	In case of there is no bills in the bill container, the display shows this message, showing minus number (EX -1) which is not dispensed.
E11	Communication Error	Receiving error during communication test.

5. Communication Protocol

***** USART Format *****

o. When a dispenser receives a command from the PC,
the dispenser transmits its status in 50 msec.

- o. normal status : ACK 0x06
- o. error status : NCK 0x0a (check sum error, data val error)

o. Dispenser is operated by a command from the Host PC,
and if there is any abnormal status including errors, the dispenser reports its status.

o. USART Format

: BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :

: STX : ID_10 : ID_1 : CMD : DATA1 : DATA2 : DATA3 : DATA4 : CS : ETX :

- o. STX : start code 0x02
- o. ID_10 : dispenser ID num 10th digit
- o. ID_1 : dispenser ID num 1st digit
- o. CMD : commands (I, B, K, S, C, **E**)
- o. DATA1 ~4 : data buffer
- o. CS : check sum (Sum from byte 0 through byte 7)
*** When the sum result is 0x02, 0x03, 0x06, 0x0a, regard the sum as 0x10.
- o. ETX : end code 0x03

B Command from HOST to Dispenser

o. **B Command to dispense notes.** ---> Response : ACK or NCK

: BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :

: STX : ID_10th : ID_1st : 'B' : '0' : 100 th : 10 th : 1st : CS : ETX :

b response from dispenser to HOST

o. **b response after dispensing notes.**

o. "b" response : After dispensing (from dispenser to host).

---> Response (from host to dispenser) : ACK or NCK

: BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :

: STX : ID_10 : ID_1 : 'b' : '0' : 100 th: 10 th : 1 st : CS : ETX :

Note: While B commend is being executed, if the Host sends other commends like “C” ‘I”, the Dispenser sends “NCK” to the Host till the dispensing process is finished by “B” commend.

C Commend from HOST to Dispenser

o. Clear the accumulated/dispensed number. → Response : ACK or NCK

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
: STX : ID_10th : ID_1st : 'I' : '0' : '0' : '0' : '1' : CS : ETX :

o. Clear error message. → Response : ACK or NCK

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
: STX : ID_10th : ID_1st : 'I' : '0' : '0' : '0' : '2' : CS : ETX :

o. Clear error message and counted number. → Response : ACK or NCK

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
: STX : ID_10th : ID_1st : 'I' : '0' : '0' : '0' : '3' : CS : ETX :

K Commend from HOST to Dispenser

o. Disable the switches pressed on the dispenser. → Response : ACK or NCK

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
: STX : ID_10th : ID_1st : 'K' : '1' : '0' : '1' : '0' : CS : ETX :
start key clear key

“S” Commend from HOST to Dispenser

o. Commend to check dispenser’s status.

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
STX : ID_10th : ID_1st : 'S' : '0' : '0' : '0' : '0' : CS : ETX :

“s” response from dispenser to HOST

o. Report its status : (Dispenser to HOST)

BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : YTE9 :
STX : ID_10 : ID_1 : 's' : 'val1' : 'val2' : '0','1' : '0','1' : CS : ETX :

- o. val1 : 'w' --> busy working, 'r' --> ready, 'e' --> error (val2 : error_code),
 't' --> test_mode
- o. BYTE6 : key_start lock or unlock ('0': unlock, '1': lock)
- o. BYTE7 : key_clear lock or unlock ('0': unlock, '1': lock)

“C” Commend from HOST to Dispenser

- o. Commend to Check dispensed number.

```
| BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
-----
| STX  : ID_10 : ID_1  : 'C'   : '0'   : '0'   : '0'   : '0'   : CS   : ETX  :
```

“c” response from dispenser to HOST

- o. Report dispensed number. (Dispenser to HOST)

```
| BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
-----
| STX  : ID_10 : ID_1  : 'c'   : '0'   : 100 th: 10 th : 1 st : CS   : ETX  :
```

Report from Dispenser to HOST

E” Report from dispenser to Host

In case of error occurring while dispensing, the Dispenser automatically reports Error status. (This report is executed by the Dispenser, regardless of any commend from the Host.)

```
| BYTE0 : BYTE1 : BYTE2 : BYTE3 : BYTE4 : BYTE5 : BYTE6 : BYTE7 : BYTE8 : BYTE9 :
-----
| STX  : ID_10 : ID_1  : 'E'   : 'val' : 100 th: 10 th : 1 st : CS   : ETX  :
```

- o. val : error code '1' : no bills during being dispensed by host commend.
- '2' : Jam 1 or Jam 2
- '3' : Chain
- '4' : Half
- '5' : Short
- '6' : no bills during being dispensed by start switch.
- '7' : Double
- '8' : over count 4000 pcs
- '9' : E11 -> Receiving error during communication test.

***** end of document *****