

# ***Text Inserting on video Emulator for **ATM/POS*****

## ***Installation***

## ***Manual***

## *SM-7100 T.I. Emulator*

Thank you for our **SM-7100(Text inserting Emulator)** product purchasing.

Please read the following User's Manual in order to use and protect your device correctly. This operating manual describes the appearance and name of the product, explains and instructs how to install, configure and use SM-7100 with high performance and for a long time.

The software and hardware products described here are under the Copyright Law of Korea. Not any part or the whole of the User's Manual can be print or/and copy without the SUNMYUNG Electro-Telecom Co., Ltd permission.

This User's Manual is subject to change without any prior notice due to the function upgrades and so on.

## *CQ500A-T1 / T4 & CQ500ATM-T1/T4*

CQ500-T series is the DVR of new generation Network 4 Channel Stand-Alone DVR H.264 compression with **Built in Video Text inserting Emulator(T1 : 1EA, T4 : 4EA)**. Up-to-date H.264 compression techniques and Linux operating system make this DVR to be the leader with high reliability, excellent image quality along with the superior efficiency.

## *Warranty Guide*

The product has 1 year warranty for any manufacturing defect. The warranty period officially will start from the product purchase date. For the warranty repair service it is necessary to have the original purchase invoice with the clearly stated purchase date. During the warranty period the defected components will be repaired or exchanged free of charge excluding the delivery and any tax fees.

Free repair service within the warranty period is not available in the following cases:

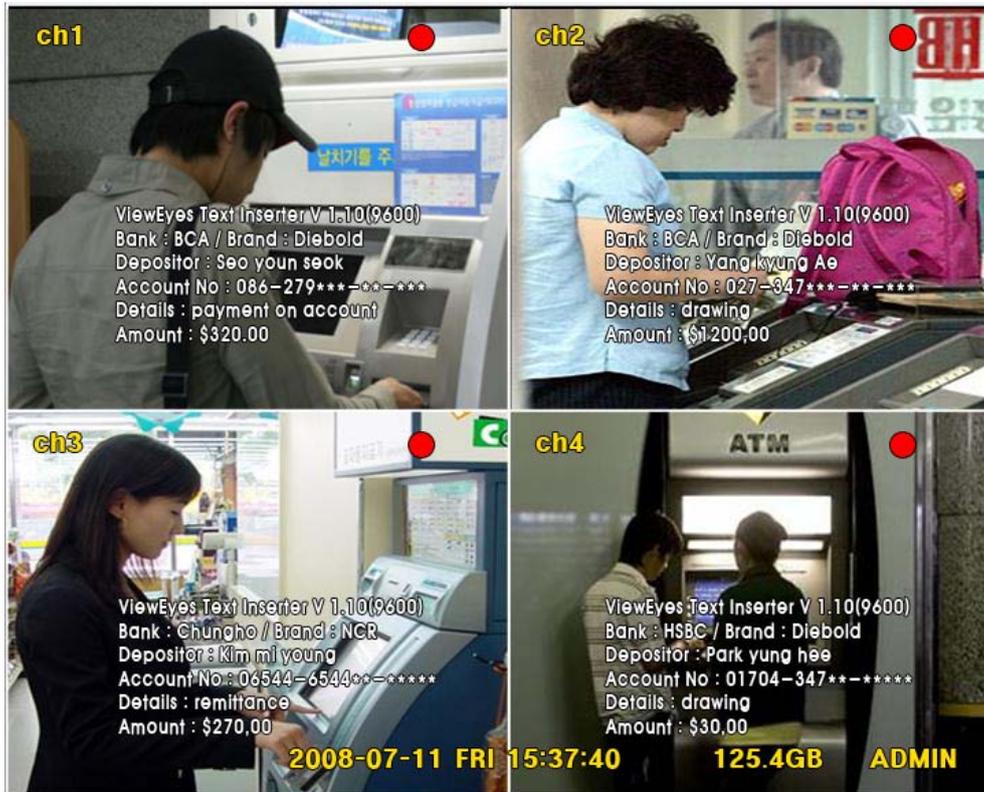
- user's carelessness
- natural disaster
- user's manual precautions and instructions abuse
- product misuse
- other similar reasons

About the product repair, exchange or free repair service issues, please contact the local dealer you purchased from.

## Table of Context

1. Overview .....	4
2. Specification .....	6
3. Installation .....	8
1) Materials Required(OS/2 ATM) .....	8
2) Materials Required(Windows ATM) .....	8
3) Typical system installation.....	8
4. Installation at Windows ATM(S/W program) .....	11
5. Installation at OS/2 ATM(Device setup).....	15
Appendix 1. Switch Setup .....	16
Appendix 2. Cable connecting and pinouts .....	18
Appendix 3. Troubleshooting.....	21

## 1. Overview



- ATM can be linked with SM-7100 via RS232 or RS485 and after connecting SM-7100 will be able to insert transaction text log on recording video.
- POS can be linked with SM-7100 via RS232 or RS485 and SM-7100 will be able to insert transaction text log(information from POS system) on POS system monitor.
- At the connection via RS232 or RS485, SM-7100 can collect the personnel information from Access Control at the login and logout and allowed to insert that data on recording video.
- SM7100(Text Inserter) system as 1Port emulator of CQ500 DVR can be linked and used in ATM, POS, Access control system where it will be able to accommodate the following RS232 or RS485 selection. In case of RS422, via Media convertor (RS422 to RS485) can be used.
- In case of using a DVR system built in text emulator, CQ500-T series must be connect With Windows ATM through RS-232 port.  
Of course, DVR can be connect to USB port of ATM by using a USB to RS232 converter

## 2. Switch Selection ( for 7100 emulator user )

1. CQ500T4 DVR with the built in 4 pieces of SM7100 can record 4 ATM (RJ45 to RS232) transaction text logs simultaneously.  
[CQ500T-series DVR system supports RS232 interface, and it doesn't need to set any switch selection.](#)
2. SM-7100 emulator can be linked and used at OS (OS2 or Windows) in compliance with Switch selections.
3. If ATM system is based on Windows, the S/W program should be installed.  
(Installation of S/W program is explained in Chapter 4)
4. If ATM system is based on OS/2, there is no need to install S/W program.  
Once the ATM model is selected, adjust the switch setup (Appendix 1) and connect external device with the appropriate cable (Appendix 2).

## 2. Specification

### 2. 1. SM-7100 Panel Layouts

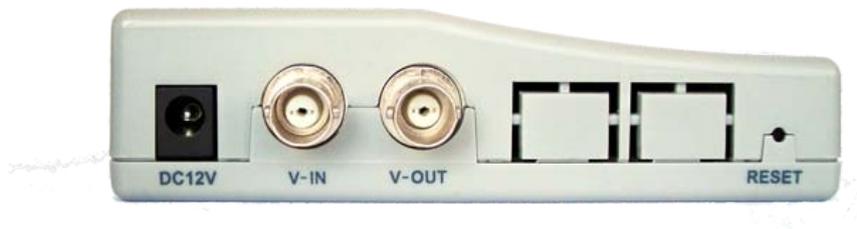
#### a. SM-7100 Front Panel Layout



#### b. SM-7100 Left Side Layout



### c. SM-7100 Right Side Layout



### d. Specification

#### 1) Video

NTSC/PAL Video Type - Factory Setting

Number of characters - Max. 360 Characters on a screen

Video In/Out Level - 1Vpp

Connector : RCA

1 channel Video In/Out

#### 2) External interface

1 RS-485 Communication Interface for ATM and POS

1 RS-232 for ISP (FLIP) - Selectable by DIP Switch (option)

2 RS-232 Serial Port for POS (option)

#### 3) Power

Power DC 8~ 15 V, Typical DC 12V

Power Consumption : 600mW

4) Size : 10.5cm(W) \* 11.5cm(L) \* 3cm(H)

5) Color : light- grey nomenclature

6) Alarm light : Run, 485, 232 (light will be turn on/off as transfer data)

### 3. Installation

#### 1) Materials Required (OS/2 ATM – conventional type)

Installation of the SM-7100 involves the following steps:

- Disconnecting ATM machine from its Journal printer port
- Connecting the unit (SM-7100 or CQ500A-T1 / T4) Data input port with ATM machine (Connect the external device with the appropriate cable (Appendix 2)).
- Connecting the unit with the surveillance system like camera, DVR system
- Configuring the SM-7100 to match the data protocols
- Attaching the video output cable of video camera to the CAMERA input of the SM-7100
- Attaching video cable of DVR output of the SM-7100 to the video input of DVR. To connect a monitor to DVR, please follow the instructions provided with the DVR.
- Attaching the power cord to the SM-7100's POWER connector and plug it into a power source

\* To detect SM-7100, please '**Reboot**' the ATM machine. It will be detected automatically by ATM machine.

\* '[CQ500A-T1 is not available to support OS/2 ATM machine. \(Only Window ATM\)](#)

#### 2) Materials Required (Windows ATM )

To install the SM-7100 into the ATM system:

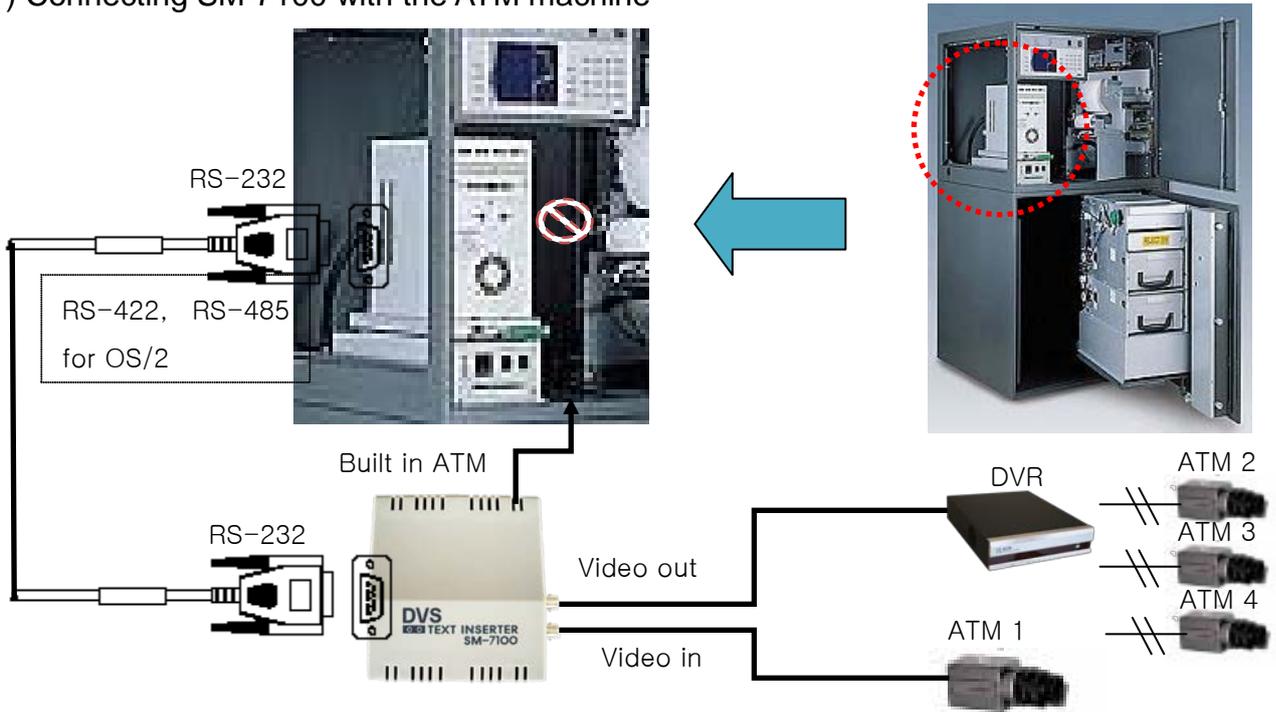
- Attach the data cable to the SM-7100 's DATA I/O port
- Attach another cable end, which is supplied with the SM-7100, to the other DATA I/O port of the SM-7100. Attach the other end of the cable to the ATM machine (Recommended RS-232; also, male USB is available, but USB driver should be installed)
- Attach the video output cable of video camera to the CAMERA input of the SM-7100
- Attach video cable of DVR output of the SM-7100 to the video input of DVR. To connect a monitor to the DVR, please follow the instructions provided with the DVR.
- Attach the power cord to the SM-7100's POWER connector and plug it into a power source.

\* The SM-7100 is shipped with a 1.8m data cable equipped with a RS-232 connector on each end (optional). Cables of this type are also available at computer or electronic supply stores.

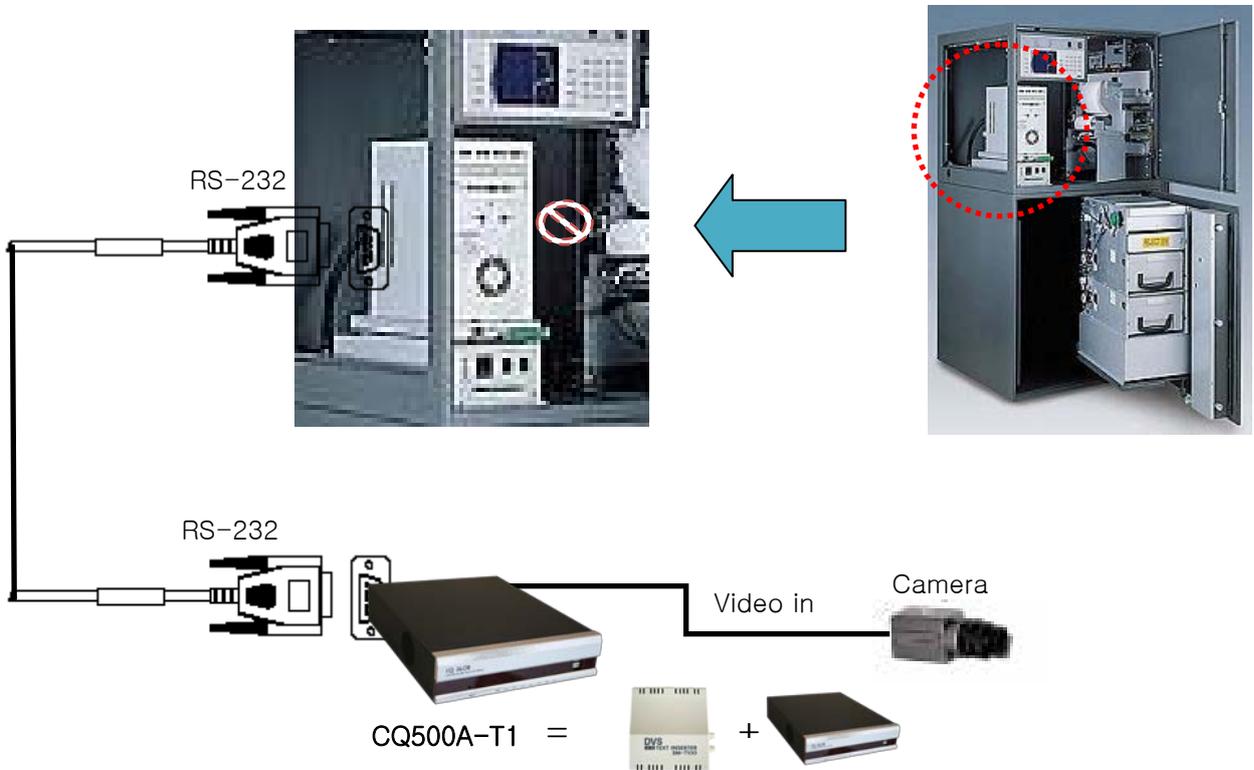
#### 3) Typical system installation

The diagram on the next page describes a typical system interface of the SM-7100 connected with an ATM, camera and DVR.

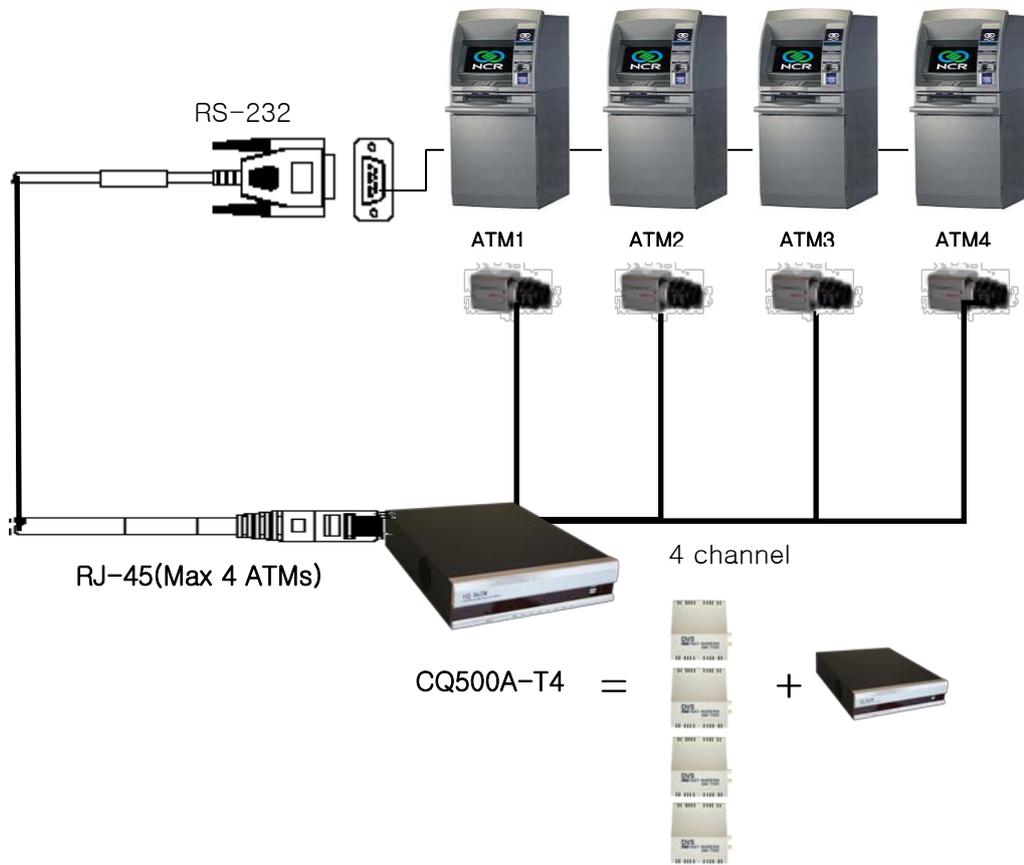
Case 1) Connecting SM-7100 with the ATM machine



Case 2) Connecting CQ500A-T1 with the ATM machine



Case 3) Connecting CQ500A-T4 with the ATM machine



Camera input signals must have RS-170 standards. The video cable of the camera for the SM-7100 must have a BNC connector. Another video cable with a BNC connector is needed to attach the SM-7100 to your DVR or monitor. Two serial data cables with the proper connectors are also required. The SM-7100 and associated equipment must have electrical power. You can find spare electrical power in ATM machine matched 12V, or should prepare additional Adapter.

**NOTICE :** In case of Windows ATM user, must be installed Windows install program of SM in ATM machine.

As for this installation program, refer to next chapter 4. Installation at Windows ATM (S/W program)

## 4. Installation at Windows ATM (S/W program)

### 1. CD installation

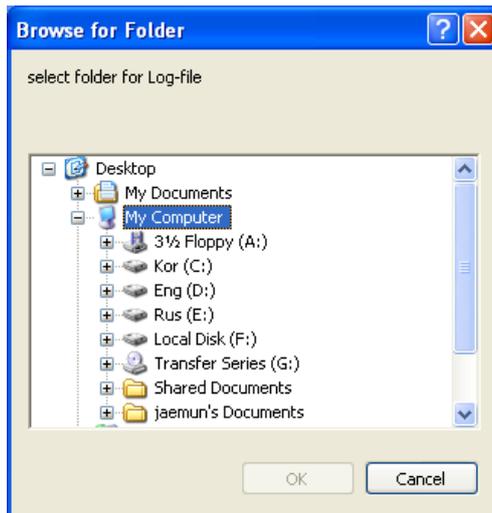
- T.I. Emulator, 7100 or CQ500-T series DVR operating can be connected via COM port or USB to Serial port between 7100 or CQ500-T series and ATM machine
- Switch on T.I. Emulator or turn on CQ500-T series after connecting data cable.
- Put the installation CD into the CD-Rom Driver of ATM. ( installation CD will be provide as a package)
- Click the file " setup.exe " in installation file, then
- This S/W program installation will start automatically.
- This program can be search file folder to install folder location as ATM series automatically. If it couldn't search automatically, have to define a folder to locate program by manual positioning according to pop-up window as below.



- Choose the folder to save the program and press "Next."
- After reboot the computer, it will be executed automatically.

### 2. USB Memory installation

- JOURNAL EMULATOR 7100 or CQ500-T series DVR can be connected via COM port or USB to Serial port.
- Switch on JOURNAL EMULATOR, 7100 or DVR
- Set USB memory stick to the port of ATM and start install program
- Click the installation program, "setup.exe" at the USB memory to start.
- This program can be search file folder to install folder location as ATM series automatically. If it couldn't search automatically, have to define a folder to locate program by manual positioning according to pop-up window as below.



- Choose the folder to save the program and press "Next."
- After reboot the computer, it will be executed automatically.

**NOTICE** : windows install program must be installed in same folder that is located journal transaction data of ATM.

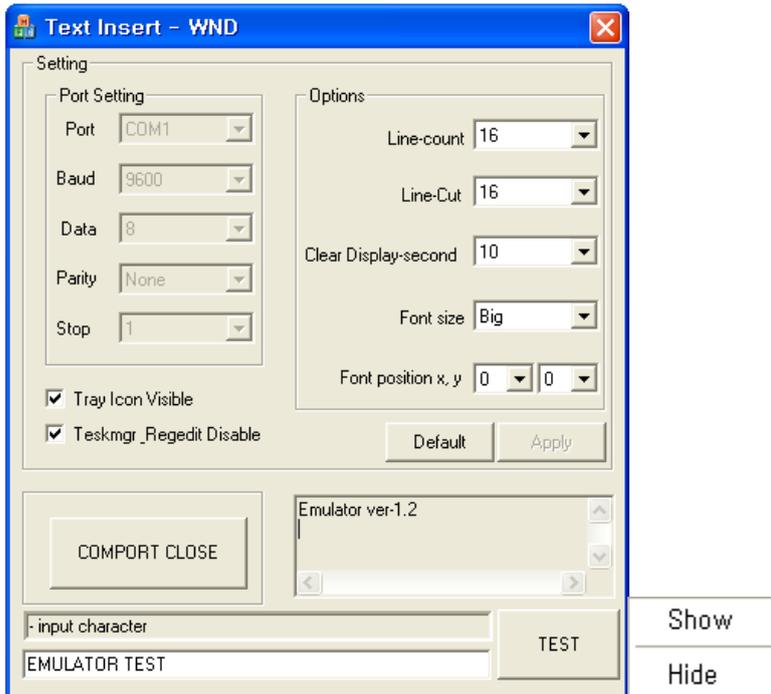
If it was installed another folder course, it doesn't work normally.  
So, you have to remove that program and have to install again.

### 3. Program Function

- Please place this install program in the same folder there is log data file folder in ATM certainly.
- After select log file folder, the Tray icon will be creates.
- When you click Tray icon, it will be able to select SHOW or HIDE menus on the screen of ATM
- In case of clicking tray icon to hide, control panel will disappear as be shown.



After finished install program, the control panel will be creates  
 In case of clicking tray icon to show, control panel will pop up as be shown.



- ATM machine equipment type (example: Sunmyung - NCR (NCR model), otherwise, there will be a message “Sunmyung -?” and ATM type does not recognize it.
- COM PORT selection (Select right Port com 1 ~ 4)
- COM PORT CLOSE/OPEN
- Test Character Input
- TEST: When you press this, you can see a text line for your test
- Information Display
- Line Count: to select the maximum possible lines.
- Line cut: Select the maximum number of line be printed.
- Clear display time: to select the maximum seconds for viewing period
- Font size: Font size selection
- Font position: Font location selection
- Tray Icon Visible : Tray Icon on the lower right-hand side. On/Off
- Taskmgr & RegEdit Disable : Lock the window task manager and registry editor or not.
- Default Button: Change all the settings to Default.
- Apply: Apply and Save

**Note 1.** Emulator Program Ver.1.1.3 has default value that Record and SALDO's data is shown as '\*'. After installing program, execute PARSEINFO.ini file(C:\Program Files\SunMyung\TextInsert\), then you can see following text.

[PARSEINFO]

DOES= \* ← Data you want to hide can be shown as the symbol which you want to change.

COUNT=2 ← Set the number of hiding data.

TARGET\_01=SALDO ← TARGET\_01= Write the name of hiding data. Data except hiding one will be shown as the symbol set in DOES.

TARGET\_02=RECORD ← TARGET\_02= Write the name of hiding data. Data except hiding one will be shown as the symbol set in DOES.

If you have data that want to be shown as symbol additionally, change the number like TARGET\_01=data name, TARGET\_02=data name, TARGET\_03=data name etc. The number should be same with COUNT value.

If you want to check this setting working normally, execute program and write the data you want to hide in Test Character.

EX) If you write SALDO 1232333, it will be shown as SALDO\*\*\*\*\*.

**Note 2.** For Emulator Program Ver.1.1.3, if you want to be shown tray icon, open comInfo.ini(C:\Program Files\SunMyung\TextInsert\ ) with notepad, change the value TRAY\_VISIBLE =1 and save. And after rebooting system, you can see tray icon again.

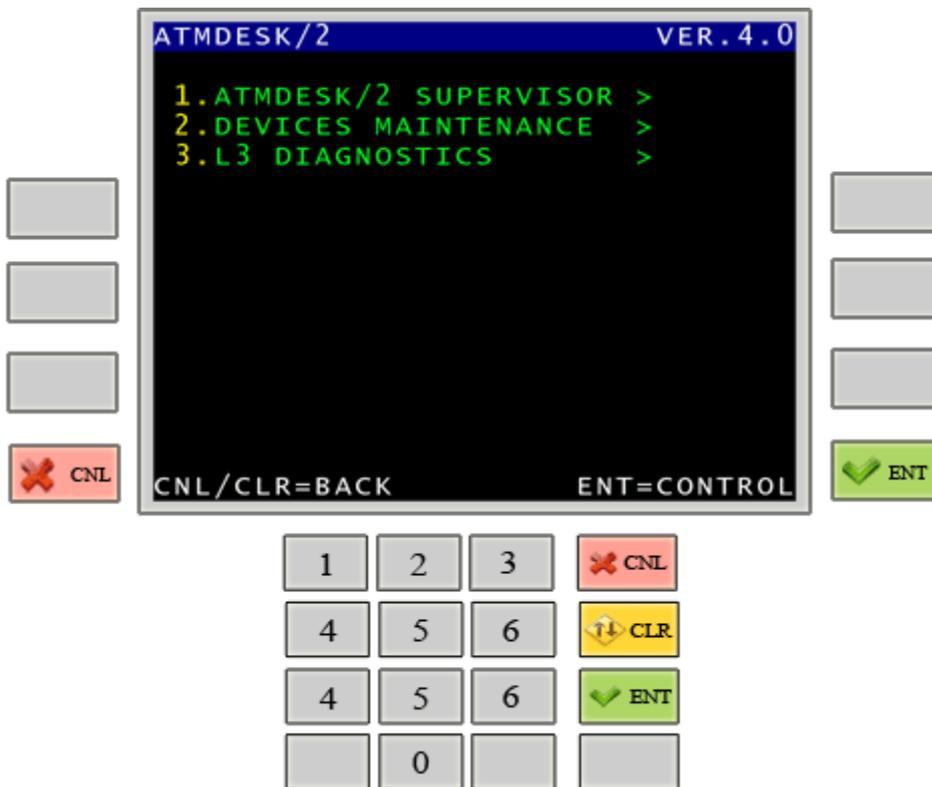
**Note 3.** If you have to remove the program because of problem or update, execute uninst.exe(C:\Program Files\SunMyung\TextInsert\). Then the program will be removed normally. (When you update program, please remove the program like this and install updated program.)

### 5. Installation at OS/2 ATM (Device setup)

In case the new device is not detected after ATM machine rebooting, please change the required ATM setting manually. (Front Interface)

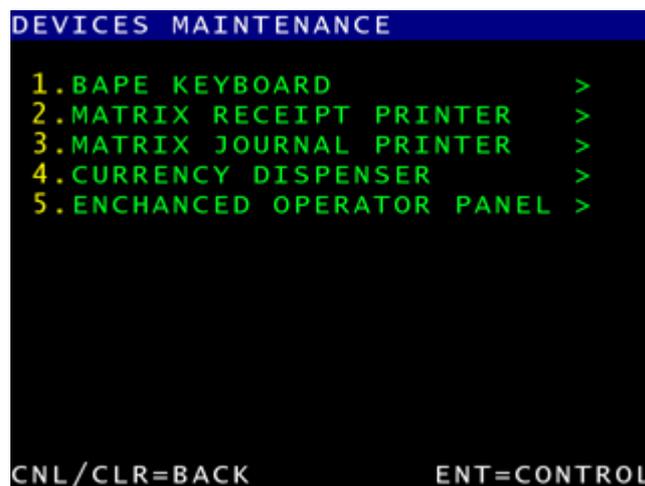
E.G) Setting Menu for NCR (front interface)

- To see the ATM main menu, press button 2 at the setup menu "Devices Maintenance"



ATM screen

At the selection of "Matrix Receipt Printer" (press button 2), the access to SM-7100 device will be set up.

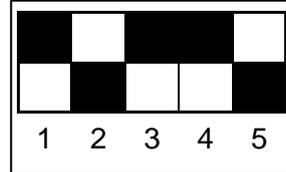


# Appendix 1. Switch Setup

## 1. SM7100

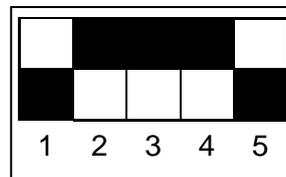
1) On Program Mode: use for Factory (RS232)

	1	2	3	4	5
OFF	↓	↑	↓	↓	↑
ON	↓	↑	↓	↓	↑



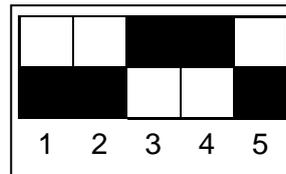
2) **Type** : NCR model, **OS**: OS2, **Interface** : RS232

	1	2	3	4	5
OFF	↑	↓	↓	↓	↑
ON	↑	↓	↓	↓	↑



3) **Type** : All ATM models, **OS**: Windows, **Interface** : RS232

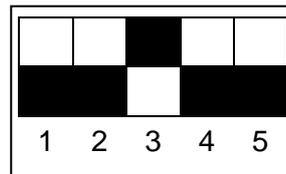
	1	2	3	4	5
OFF	↑	↑	↓	↓	↑
ON	↑	↑	↓	↓	↑



4) **Type** : Diebold 1064iX, **OS**: OS2, **Interface** : RS485

5) **Type** : IBM 4783, **OS**: OS2, **Interface** : RS485

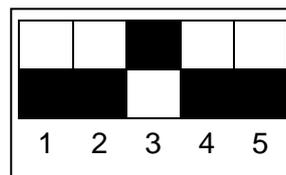
	1	2	3	4	5
OFF	↑	↑	↓	↑	↑
ON	↑	↑	↓	↑	↑



6) **Type** : IBM 4782, **OS**: OS2, **Interface** : RS422

7) **Need Media convertor (RS422 ⇔ RS485)**

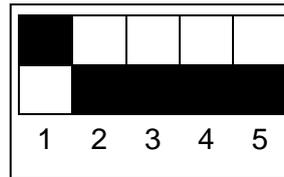
	1	2	3	4	5
OFF	↑	↑	↓	↑	↑
ON	↑	↑	↓	↑	↑



## 2. CQ500T4 Switch Setup (not support RS485)

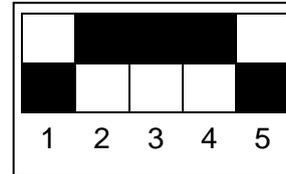
1) On Program Mode: use for Factory (RS232)

	1	2	3	4	5
OFF	↓	↑	↑	↑	↑
ON	↓	↑	↑	↑	↑



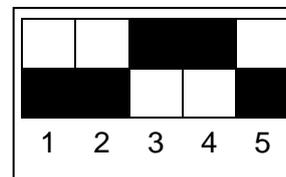
2) **Type:** NCR model, **OS:** OS2, **Interface:** RS232

	1	2	3	4	5
OFF	↑	↓	↓	↓	↑
ON	↑	↓	↓	↓	↑



3) **Type:** All ATM models, **OS:** Windows, **Interface:** RS232

	1	2	3	4	5
OFF	↑	↑	↓	↓	↑
ON	↑	↑	↓	↓	↑



## Appendix 2. Cable connecting and pinouts

### 1) SM-7100 and CQ500A-T1 / T4 Port Pinouts

#### i. RS232 Interface

1	2	3	4	5	6	7	8	9
X	RxData	TxData	DTR	GND	DSR	RTS	CTS	X

#### ii. RS485 Interface

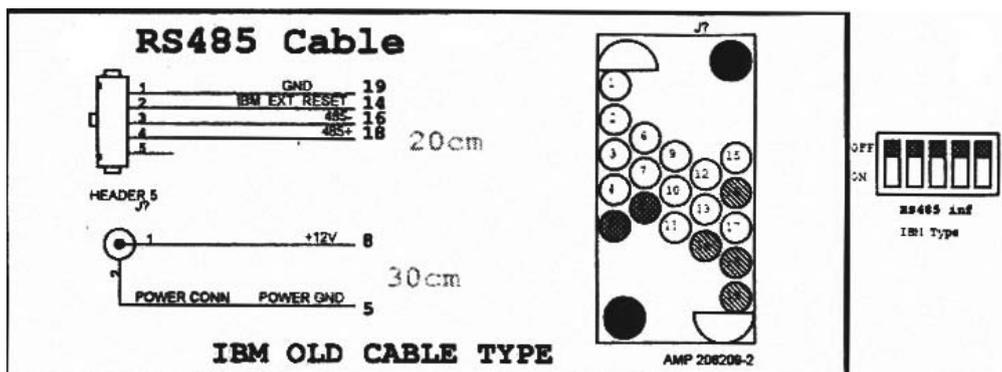
1	2	3	4	5
GND	EXT_RST	485-	485+	GND

#### iii. RJ45 Interface(CQ500A-T4)

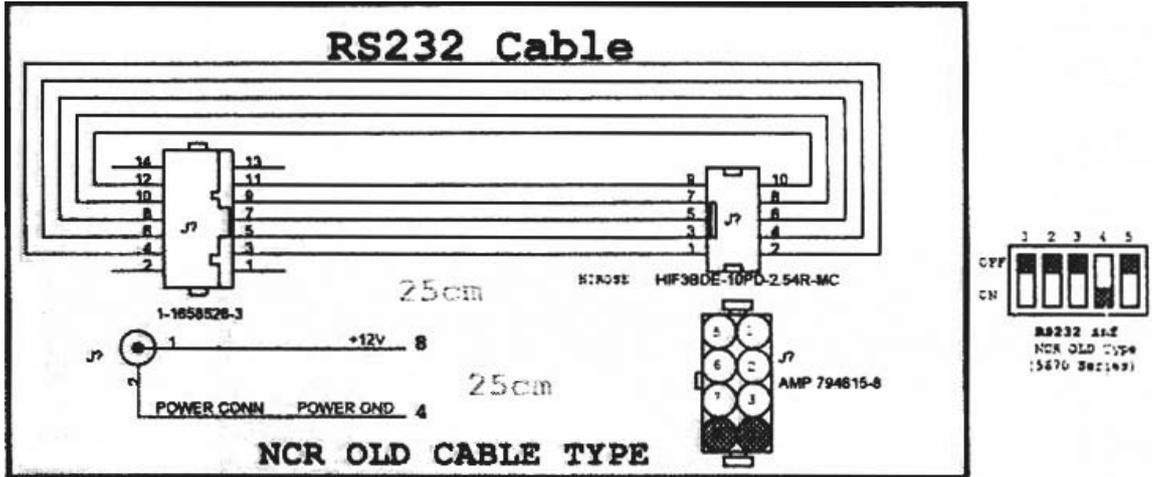
1	2	3	4	5	6	7	8
DTR	X	RTS	RXD	CTS	TXD	DSR	GND

### 2) OS2 Accessories and Pin Settings

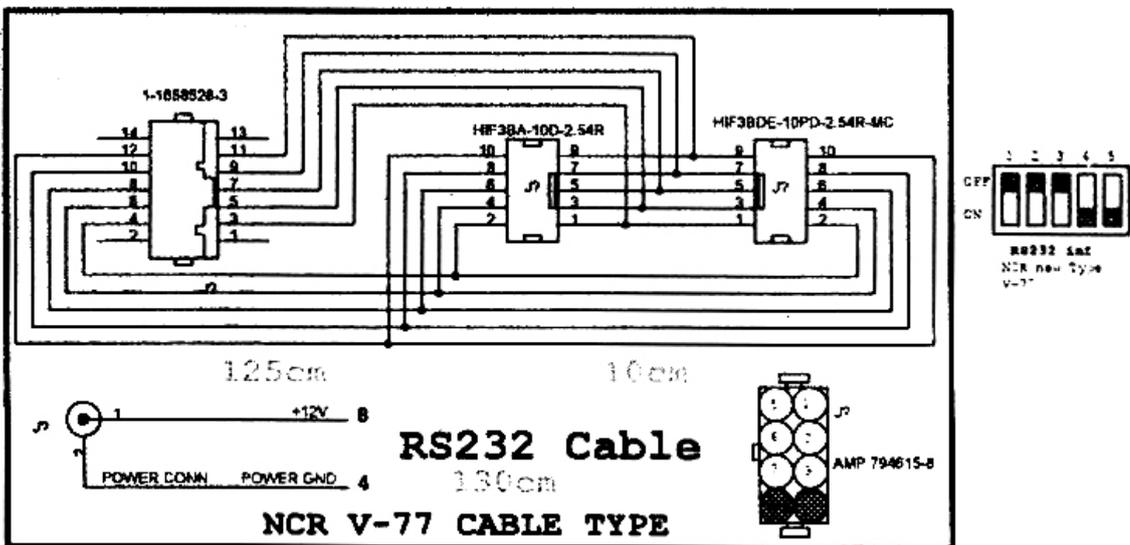
#### iv. IBM Old Cable Type



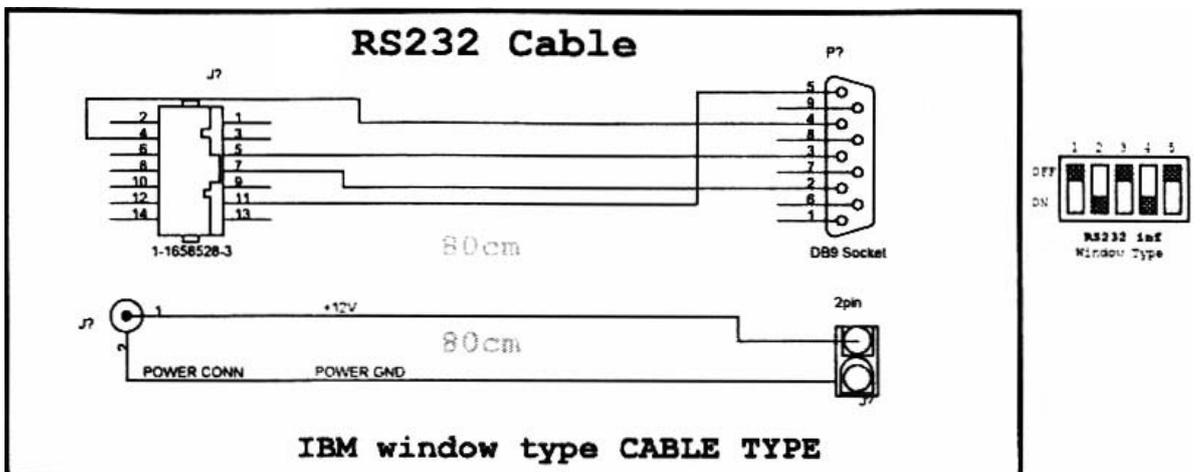
v. NCR Old Cable Type



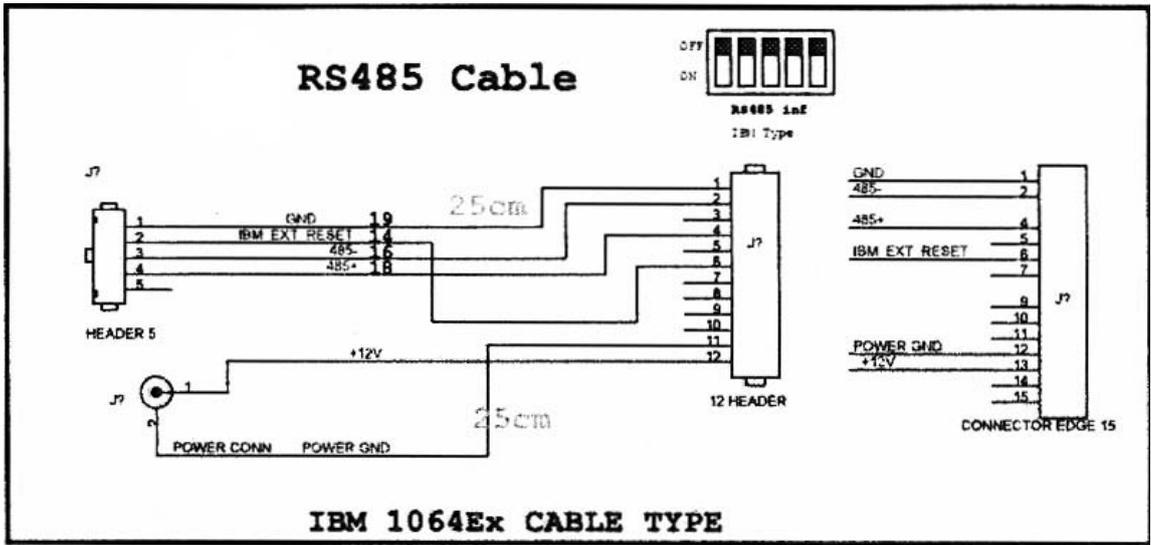
vi. NCR V-77 Cable Type



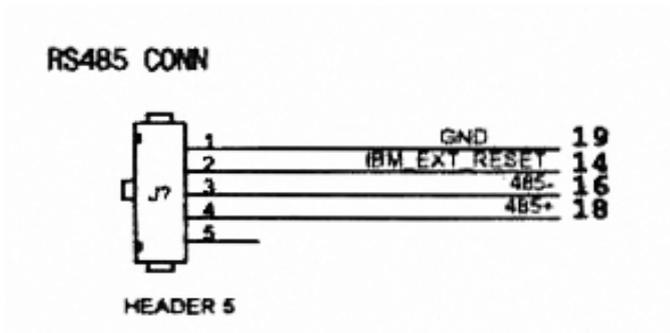
vii. IBM Window Type Cable Type



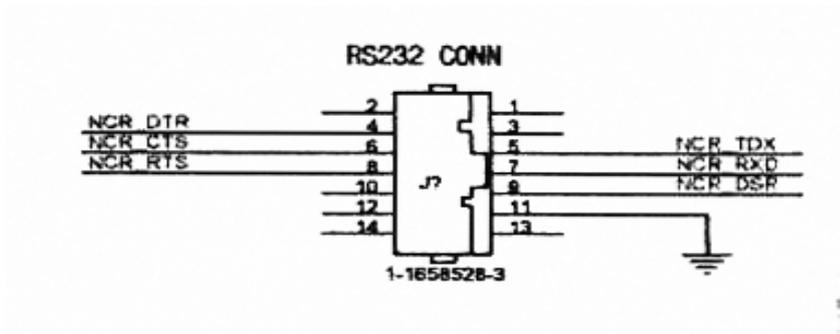
viii. IBM 1064Ex Cable Type



ix. Pinouts(RS-485)



x. Pinouts(RS-232)



## Appendix 3. Troubleshooting

Once properly installed, your SM-7100 should operate trouble free because the unit has no moving parts. However, should you encounter problems, check these possible causes first.

Symptoms	Possible causes	Actions to take
Video, no text, SM-7100 power light off.	SM-7100 is not powered.	Check power plug connection on SM-7100. Check that the DC power supply is plugged into outlet. Check that the outlet has power. If power light remains off, you should replace the power supply.
Black picture, no text, SM-7100 power light on.	Monitor is not powered or not connected to the SM-7100	Check that your monitor is connected correctly to the SM-7100 and has power.
Broken image.	Camera cable is broken or loose.	Check cable connections between camera and SM-7100
	Camera is not functioning.	Check the camera is powered and working properly.
Normal picture, no text.	Data is not being sent from the register or ATM.	Operate the register or ATM in a way that normally sends text.
	Data cable is broken or loose.	Check the cable connections between register or ATM and the SM-7100. Check that the data cable is intact.
	Text is positioned off the screen.	Adjust the HORIZ and/or VERT text controls on the SM-7100
Normal text over black or poor quality picture.	Camera lens is covered.	Remove obstruction from the front of camera lens.
	Camera iris is closed or misadjusted.	If camera has manual iris control, open the iris. If auto-iris, adjust following its operation manual or refer for outside servicing.
	Camera lens is not focused, dirty, or improperly connected.	Check condition of camera lens; refer for outside servicing if necessary.
	Camera electronics is not operating properly.	Check condition of camera; refer for outside servicing if necessary.