



**Installation Manual**

# **JavaPOS Driver**

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**Rev. 4.02**

## Introduction

This manual provides information on the BIXOLON JavaPOS driver as well as on the usage POS printer products offered by BIXOLON.

The following are terms contained in this manual.

- JDK : Java Development Kit
- JRE : Java Runtime Environment
- JavaPOS : Java Point of Sale
- JCL Utility : JavaPOS Configuration Loader Utility

### [Reference Websites]

- <http://www.javapos.com> : Java POS committee website
- <http://java.com> : Official Java website
- <http://www.bixolon.com> : BIXOLON printers website

We at BIXOLON maintain ongoing efforts to enhance and upgrade the functions and quality of all our products. In following, product specifications and/or user manual content may be changed without prior notice.

# Table of Contents

<b>1. Usage Environment .....</b>	<b>4</b>
1-1 Features .....	4
1-2 Supported Operating Systems.....	4
1-3 Java Environment.....	4
1-4 Supported Interface .....	5
<b>2. Installation - Windows OS.....</b>	<b>6</b>
2-1 JavaPOS Driver Installation.....	6
2-2 JDK & JRE installation.....	8
2-3 Java communication files installation.....	9
2-4 Environment Variables configuration .....	10
<b>3. Installation - Linux OS .....</b>	<b>11</b>
3-1 Java installation .....	11
3-2 JavaPOS driver installation.....	11
3-3 JavaPOS Communication Files installation .....	12
<b>4. JavaPOS Configuration Utility Setting.....</b>	<b>13</b>
4-1 POSPrinter Registration .....	13
4-2 MSR Registration .....	16
4-3 CashDrawer Registration .....	18
4-4 LineDisplay Registration.....	19
4-5 Trace Setting .....	24
4-6 Port Range Setting .....	25
<b>5. Bixolon JPOS Test Program .....</b>	<b>26</b>
<b>6. Sample Source.....</b>	<b>27</b>
6-1 POS Printer Samples .....	27
6-2 CashDrawer Samples.....	27
<b>7. Precautions .....</b>	<b>28</b>

# **1. Usage Environment**

## **1-1 Features**

Using standard API functions, the POS System can be developed more quickly and easily, and applications can be developed independently from the operating system.

## **1-2 Supported Operating Systems**

- Windows XP (32/64bit)
- Windows Server 2003 (32/64bit)
- Windows Vista (32/64bit)
- Windows 7 (32/64bit)
- Windows 8 (32/64bit)
- Windows 10 (32/64bit)
  
- OpenSUSE 11.3 (kernel 2.6.34) 32/64bit
- Red Hat Enterprise Linux 7.3 (kernel 3.10.0-514) 64bit
- CentOS 6.6 (kernel 2.6.32-504) 32/64bit
- CentOS 7.0 (kernel 3.10.0-123) 64bit
- SUSE Linux Enterprise Desktop 12.0 (kernel 3.12.28-4.6) 64bit

## **1-3 Java Environment**

- JRE(Java Runtime Environment) 32bit Version 1.5 or higher

## 1-4 Supported Interface

### 1) POSPrinter

Model	S	U	E	B	W
STP-103III	O	O	X	X	X
SRP-275 / SRP-275II / SRP-275III	O	O	O	X	X
SRP-330 / SRP-330II / SRP-332II SRP-E300 / SRP-E302	O	O	O	X	X
SRP-340II / SRP-342II	O	O	O	X	X
SRP-350 / SRP-350II / SRP-350III / SRP-352III SRP-350plus / SRP-352plus SRP-350plusII / SRP-352plusII	O	O	O	X	X
SRP-350plusIII / SRP-352plusIII SRP-380 / SRP-382 / SRP-383 SRP-F310II / SRP-F312II SRP-F313II / SRP-S300	O	O	O	O	O
SRP-F310 / SRP-F312	O	O	O	X	O
SRP-Q300 / SRP-Q302	X	O	O	O	O
SRP-QE300 / SRP-QE302	X	O	O	X	X
SPP-R200	O	O	X	O	X
SPP-R200II / SPP-R200III SPP-R300 / SPP-R310 SPP-R400 / SPP-R410	O	O	X	O	O
SPP-R210 / SPP-R220	X	O	X	O	O

\* S: Serial, U: USB, E: Ethernet, B: Bluetooth, W: Wireless LAN

### 2) MSR(Magnetic Stripe Reader)

Model	S	U	E	B	W
SPP-R200_MSR	O	O	X	O	X
SPP-R200II_MSR / SPP-R200III_MSR	O	O	X	O	O
SPP-R210_MSR / SPP-R220_MSR	X	O	X	O	O
SPP-R300_MSR / SPP-R310_MSR SPP-R400_MSR	O	O	X	O	O

\* S: Serial, U: USB, E: Ethernet, B: Bluetooth, W: Wireless LAN

### 3) LineDisplay

Model	Serial	USB
BCD-2000	O	O
BCD-3000	X	O

<b>Note</b>	BCD-2000/3000 are supported by USB interface, but it's Connected via Virtual COM port.
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## **2. Installation - Windows OS**

The BIXOLON JavaPOS driver includes the JavaPOS Device Control, JavaPOS Device Service, JCL(Java Configuration Loader) Utility, manual, test program, sample source, etc.

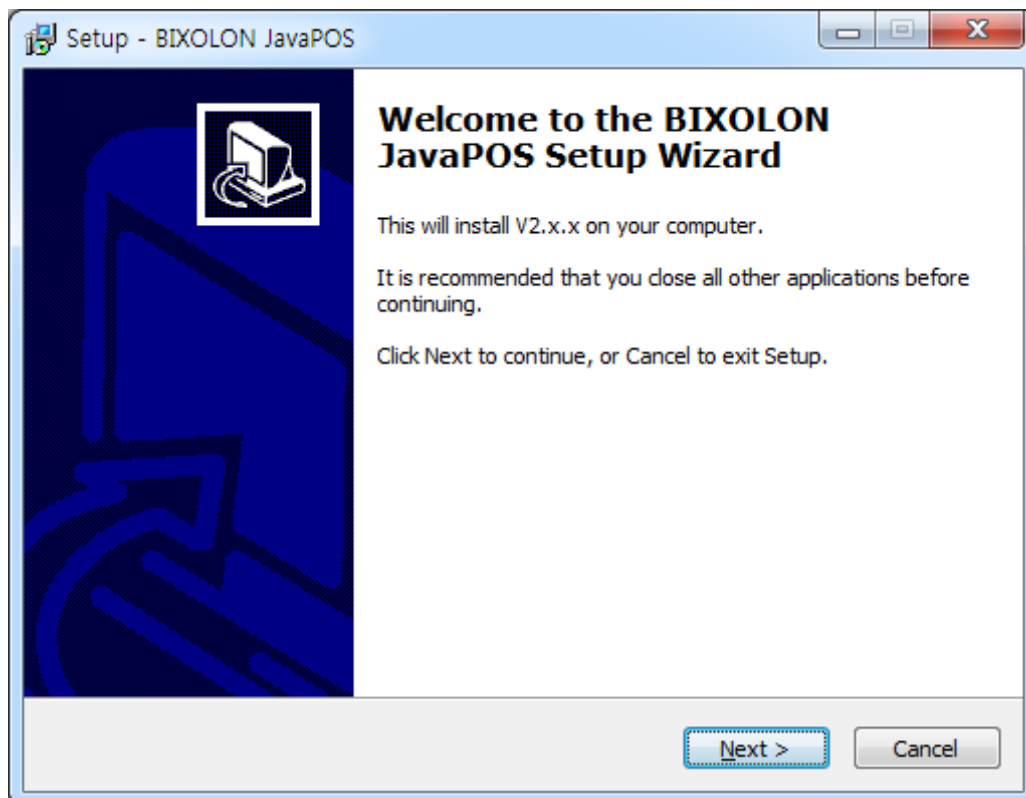
### **2-1 JavaPOS Driver Installation**

1) Java Installation

Download the 1.5 or higher version of the Java.

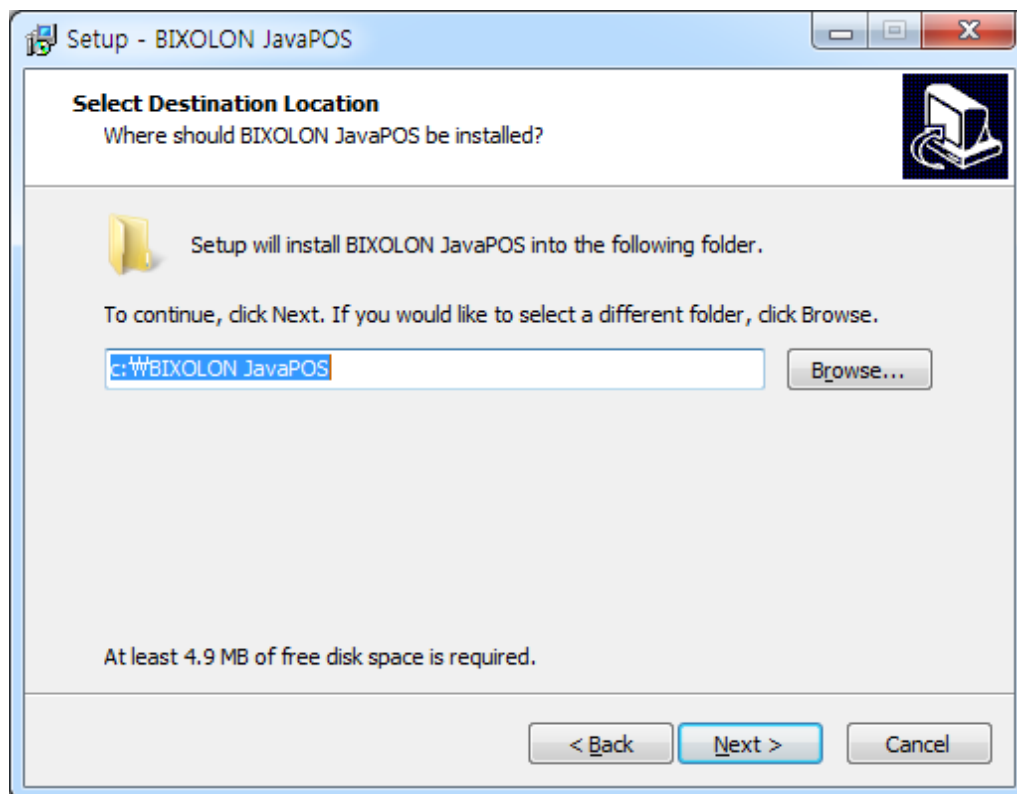
<http://java.sun.com/javase/downloads/index.jsp>

2) "Welcome" dialog is displayed.

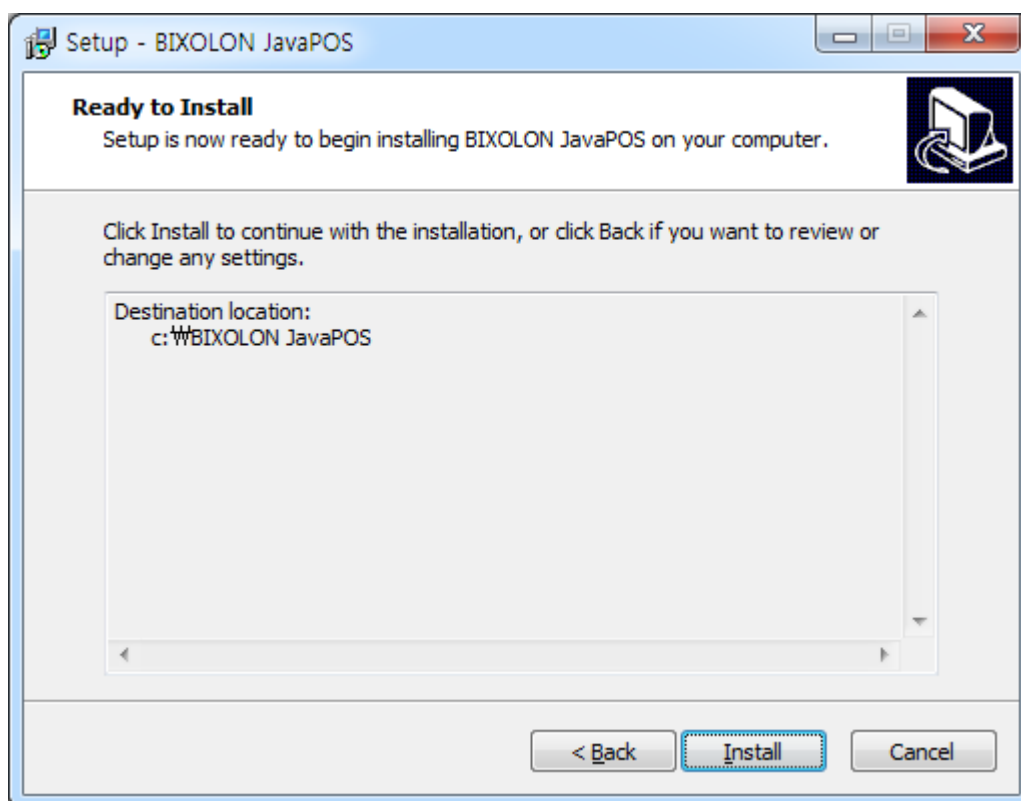


3) Select the installation folder.

The default folder: "C:\BIXOLON JavaPOS\"



4) Ready to install.



## **2-2 JDK & JRE installation**

### 1) JDK & JRE Installation

Download the 1.5 or higher version of the JDK for Windows 32bit from  
<http://java.sun.com/javase/downloads/index.jsp>

2) Run “jdk-XXX-windows-i586-X.exe” and install the JDK.

#### **Note**

- The JRE is installed automatically during JDK installation and thus no separate JRE installation is required.



### 2-3 Java communication files installation

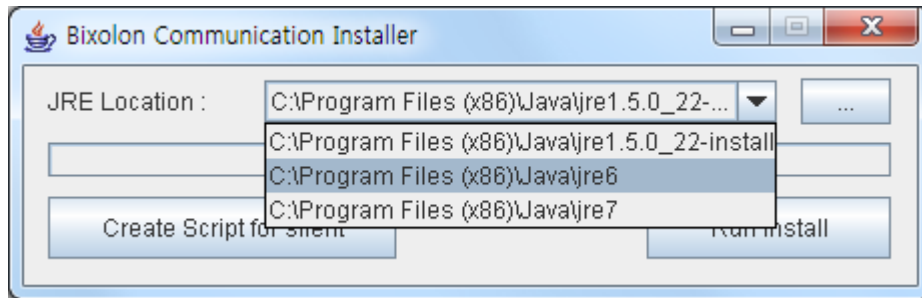
1) Run "CommInstaller.exe" file on installation path.



**Warning**

**- Run as administrator.**

2) Check the JRE(Java Runtime Environment) location.

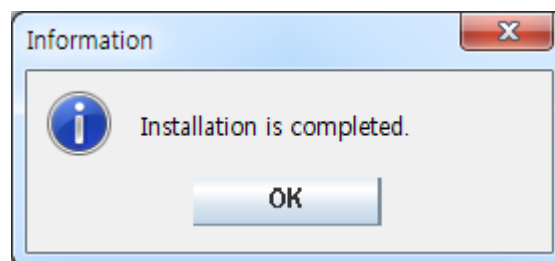


#### Note

- JRE location will be displayed. In case of various JRE installation, select one of the JRE location in Combo-box as above image.
- Unless JRE location does display in Combo Box, Click "Change install location" button. Then assign the correct JRE location.

3) Click "Run Install" button.

4) As soon as installation is complete, "Installation is completed" dialog message will be displayed.



**Warning**

**- In case that "Installation is failed" message will be popped up, installation doesn't complete correctly. JavaPOS driver can not be worked properly.**

5) 2 files below will be installed in a folder which includes CommInstaller.exe file.

- bixolon-jclutility.bat : batch file for running JavaPOS Configuration Loader
- bixolon-testprogram.bat : batch file for running JavaPOS test program

**2-4 Environment Variables configuration**

1) Select Start -> Settings -> Control Panel -> System.

**Note**

- You can use bixolon-jclutility.Bat and bixolon-testprogram.Bat In BIXOLON JavaPOS Driver without the setting of the environment variables.  
- System may not appear if using Windows XP. In such cases, click "Switch to Classic View" at the top left of the Control Panel, and the System icon should appear.

2) In the Advanced tab, click the "Environment Variables" button.

3) Add the following content in the path value of both the user environment variables and the system environment variables.

To Be Added: <JRE Location on CommInstaller>\bin

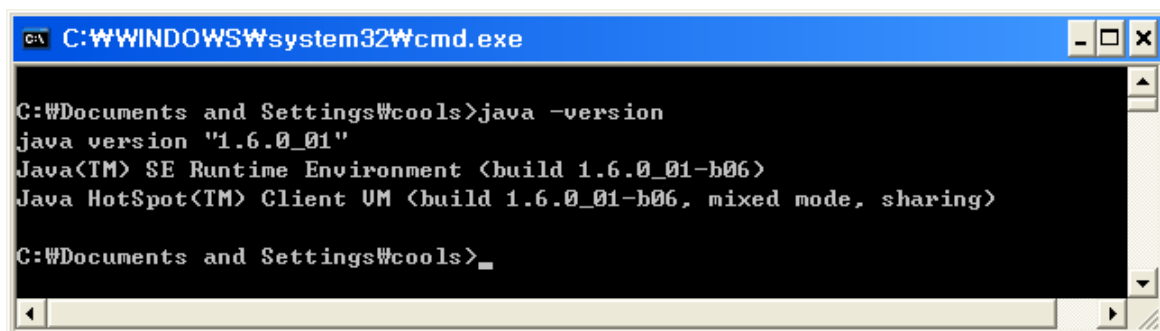
Ex) C:\Program Files\Java\jre1.6.0\bin

4) Reboot the computer.

5) Select Start -> Programs -> Accessories -> Command Prompt.

6) Enter "java -version" in the command prompt window.

7) If the following appears, installation has been completed successfully.



```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\cools>java -version
java version "1.6.0_01"
Java(TM) SE Runtime Environment (build 1.6.0_01-b06)
Java HotSpot(TM) Client VM (build 1.6.0_01-b06, mixed mode, sharing)

C:\Documents and Settings\cools>
```

## 3. Installation - Linux OS

The BIXOLON JavaPOS driver includes the JavaPOS Device Control, JavaPOS Device Service, JCL(Java Configuration Loader) Utility, manual, test program, sample source, etc.

### 3-1 Java installation

Referring below link, install JAVA.

[https://java.com/en/download/help/linux\\_install.xml](https://java.com/en/download/help/linux_install.xml)

### 3-2 JavaPOS driver installation

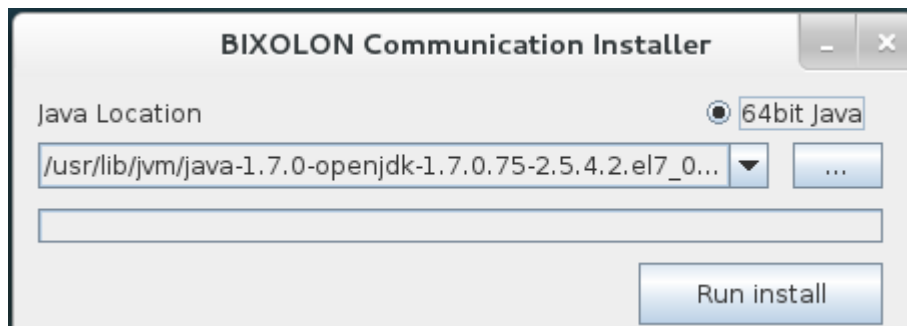
- 1) Copy the JavaPOS driver file (.tgz) to the installation path.  
>> cp Software\_BIXOLON\_JavaPOS\_Setup\_EN\_Vx.x.x.tgz /opt/bixolon/javapos
- 2) Move to the installation path.  
>> cd /opt/bixolon/javapos
- 3) Unzip JavaPOS driver file(.tgz).  
>> tar -xvf Software\_BIXOLON\_JavaPOS\_Setup\_EN\_Vx.x.x.tgz

**Note**

- Following example installs the driver at **/opt/bixolon/javapos**
- If the installation path is different, only change the installation path.
- The exemplified path requires root authority

**3-3 JavaPOS Communication Files installation**

- 1) If x-windows is accessible  
>> ./comminstaller-ui.sh



The currently configured java path is displayed.

If a different Java version is needed to be installed or a different path for Java installation is required, set it to another java via the 'update-alternatives' command and then run comminstaller again.

>> update-alternatives --config java

- 2) If x-windows is not executed

>> ./comminstaller-cmd.sh

When the following message appears, enter the path to java installed on your PC.

Enter your java location : /usr/lib/jvm/jre6 (Example)

- 3) When the communication file installation is completed, two files are created.

- bixonon-jclutility.sh : JavaPOS Configuration utility executing file
- bixonon-testprogram.sh : JavaPOS Test program excuting file

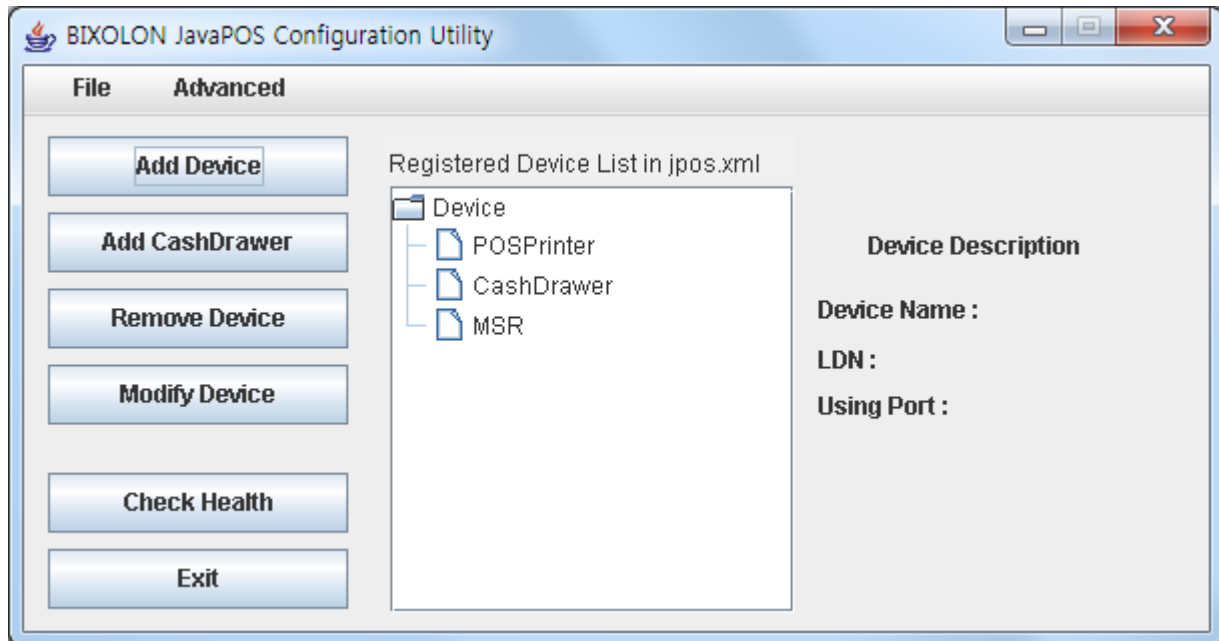
\* When setting the class path of the jar file in the program, refer to the path of class path set in bixonon-testprogram.sh file.

**Note**

- Above procedure requires root authority
- If root authority is not be obtained, communication module files required for JavaPOS cannot be installed.

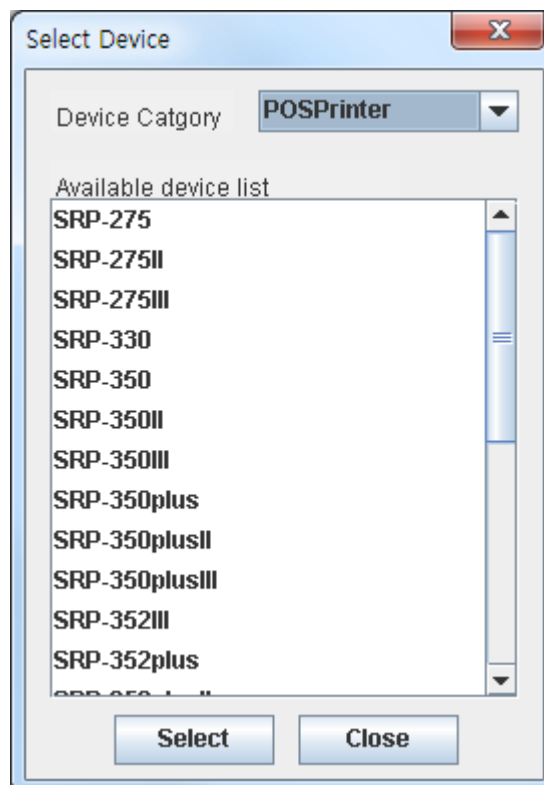
## 4. JavaPOS Configuration Utility Setting

Double click “bixonlon-jclutility.bat”. The JavaPOS Configuration Utility begins.

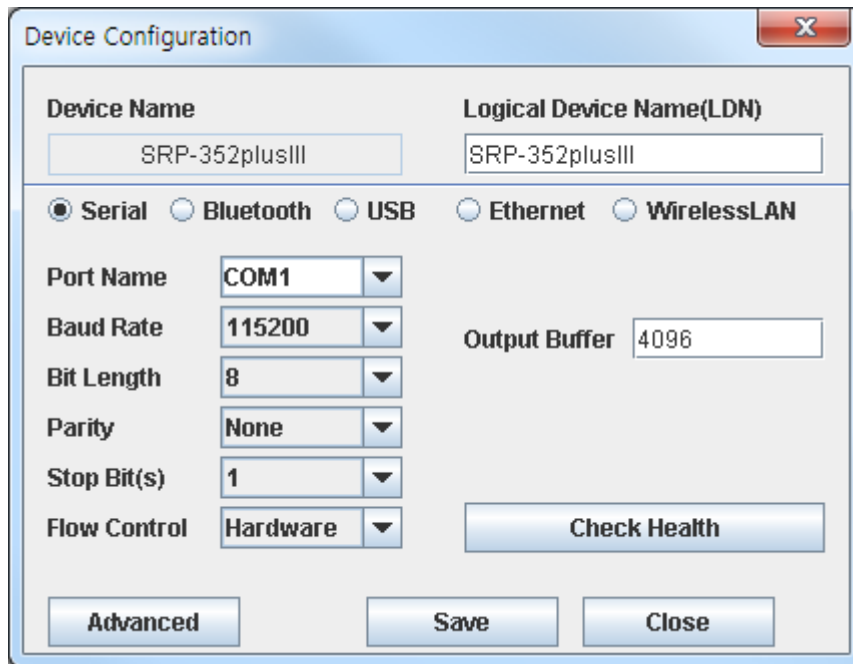


### 4-1 POSPrinter Registration

1) Click “Add Device” button and select ‘POSPrinter’ in Device Category.

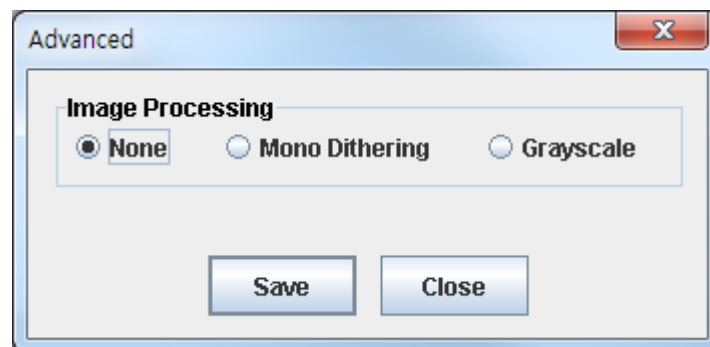


2) Click the “Select” button after choosing one of the available device lists.



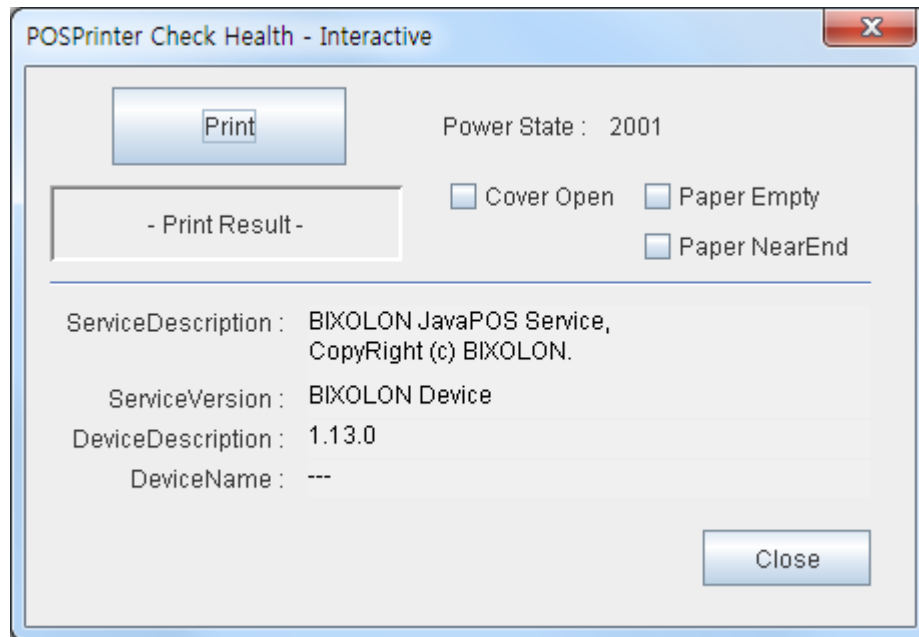
3) Set the communication environment of the connected printer and click “Save” button.

4) To apply the dithering or grayscale printing when you want to print the image, please select the following Advanced dialog.

**Note**

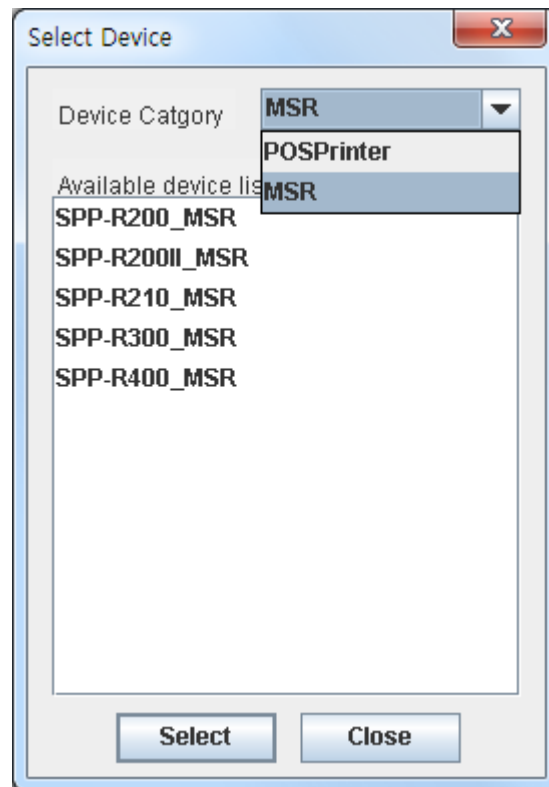
- The image processing options can only be applied to "PrintBitmap" function.
- Grayscale printing is only supported model.

5) Click “Check Health” to see if the printer operates properly.

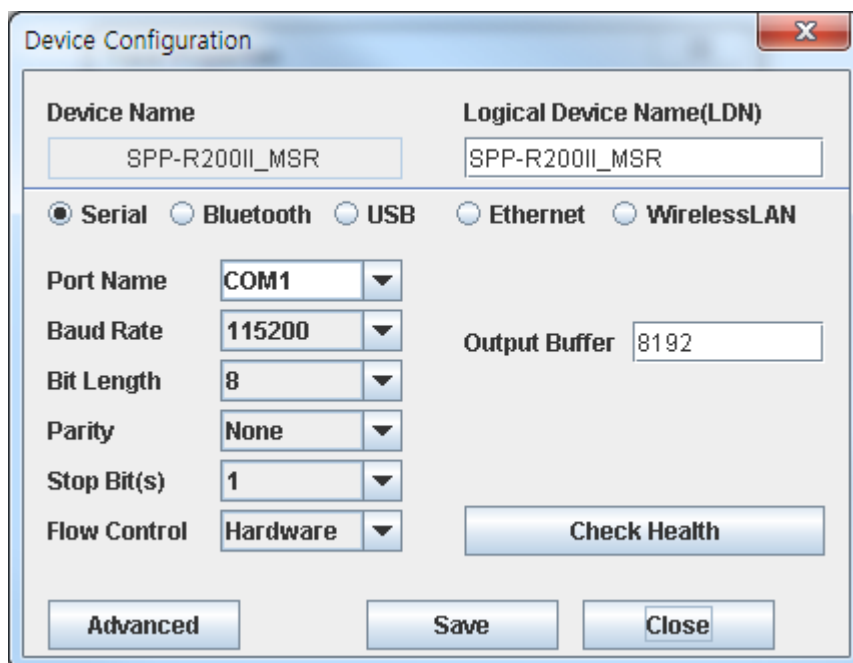


## 4-2 MSR Registration

1) Click “Add Device” button and select ‘MSR’ in Device Category.



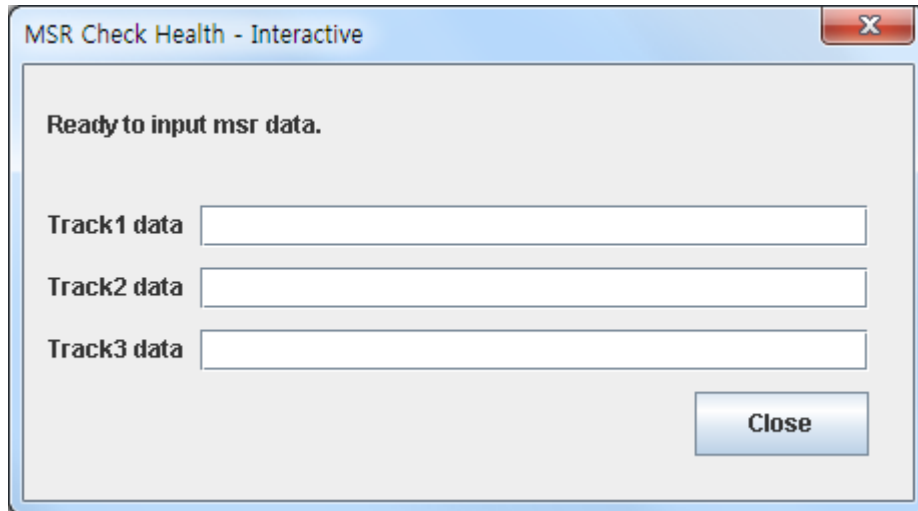
2) Click the “Select” button after choosing one of the available device lists.



3) The communication environment of the connected device and click “Save” button.

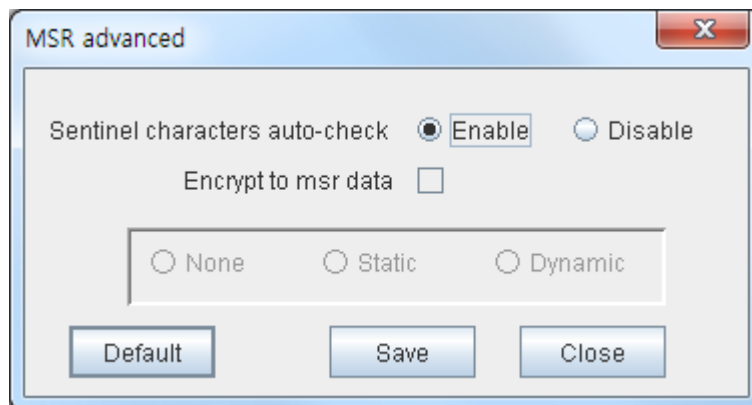


4) Click “Check Health” to see if the device operates properly.



A dialog box titled "MSR Check Health - Interactive" with a close button (X) in the top right corner. The main text reads "Ready to input msr data." Below this, there are three input fields labeled "Track1 data", "Track2 data", and "Track3 data". A "Close" button is located at the bottom right of the dialog.

5) Click the “Advance” button for setting MSR Data Encyption mode, Sentinel Character Auto-check mode.



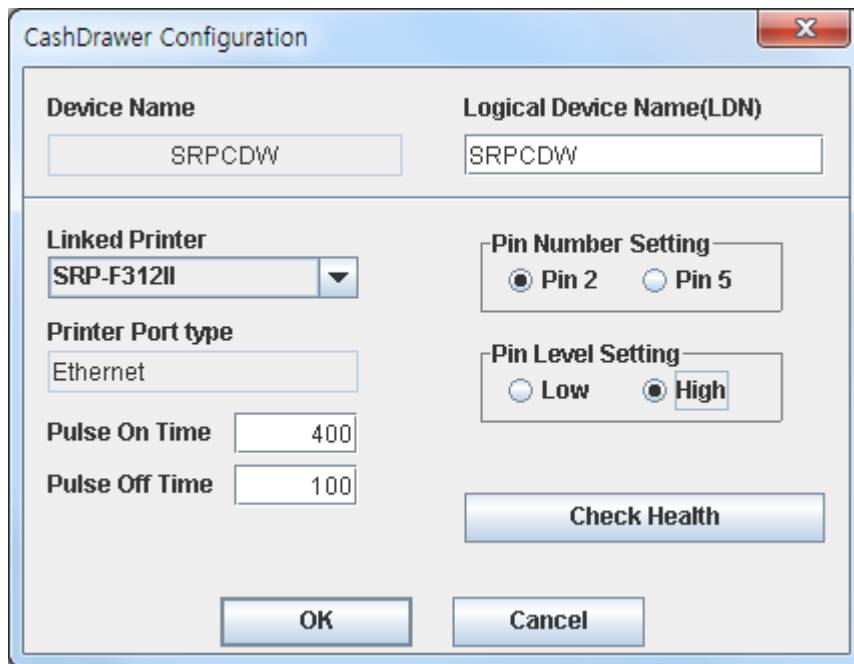
A dialog box titled "MSR advanced" with a close button (X) in the top right corner. It contains two radio button options: "Sentinel characters auto-check" with "Enable" selected and "Disable" unselected. Below this is a checkbox for "Encrypt to msr data" which is currently unchecked. Underneath the checkbox is a group box containing three radio button options: "None", "Static", and "Dynamic". At the bottom of the dialog are three buttons: "Default", "Save", and "Close".

**Note**

**- MSR data can be recognized when MSR advanced setting option is same as printer actual setting. If not MSR data can not be recognized.**

### 4-3 CashDrawer Registration

1) Click “Add CashDrawer” button.

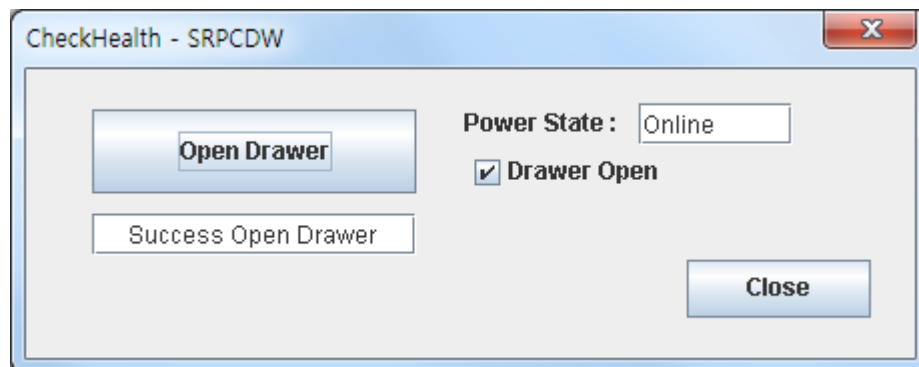


The 'CashDrawer Configuration' dialog box contains the following fields and controls:

- Device Name:** Text box containing 'SRPCDW'.
- Logical Device Name(LDN):** Text box containing 'SRPCDW'.
- Linked Printer:** Combo box showing 'SRP-F312II'.
- Printer Port type:** Text box showing 'Ethernet'.
- Pulse On Time:** Text box showing '400'.
- Pulse Off Time:** Text box showing '100'.
- Pin Number Setting:** Radio buttons for 'Pin 2' (selected) and 'Pin 5'.
- Pin Level Setting:** Radio buttons for 'Low' and 'High' (selected).
- Check Health:** Button.
- OK:** Button.
- Cancel:** Button.

2) Select the Printer which works with CashDrawer in ‘Linked Printer’ Combo-Box and set the Pin Number and Pin Level.

3) Save the settings by “OK” button click or check if communication status through the CashDrawer is normal by “CheckHealth” button.

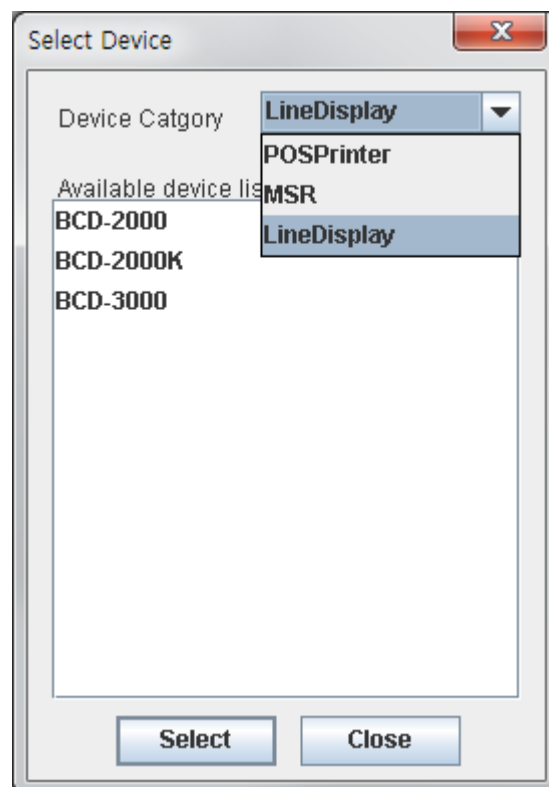


The 'CheckHealth - SRPCDW' dialog box displays the following information and controls:

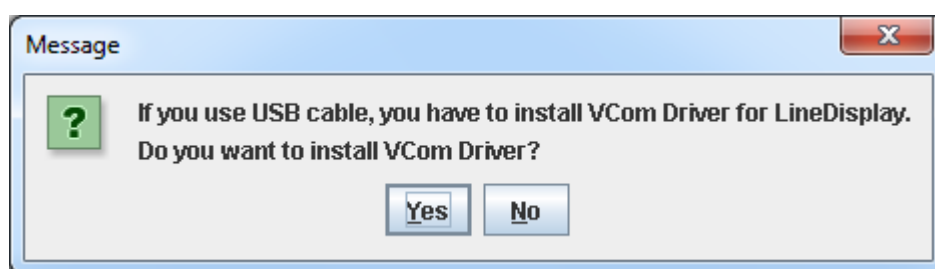
- Open Drawer:** Button.
- Power State:** Text box showing 'Online'.
- Drawer Open:** Checked checkbox.
- Success Open Drawer:** Text box.
- Close:** Button.

#### **4-4 LineDisplay Registration**

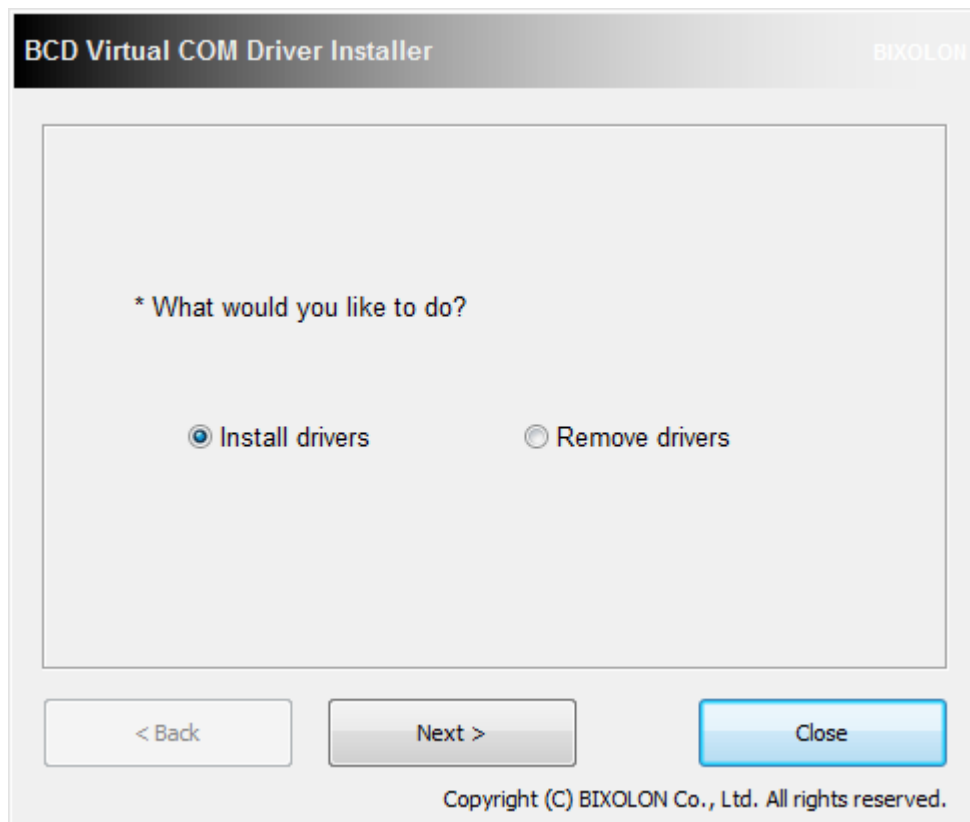
- 1) After selecting “Add Device” button on the main screen, select “LineDisplay” in Device Category.



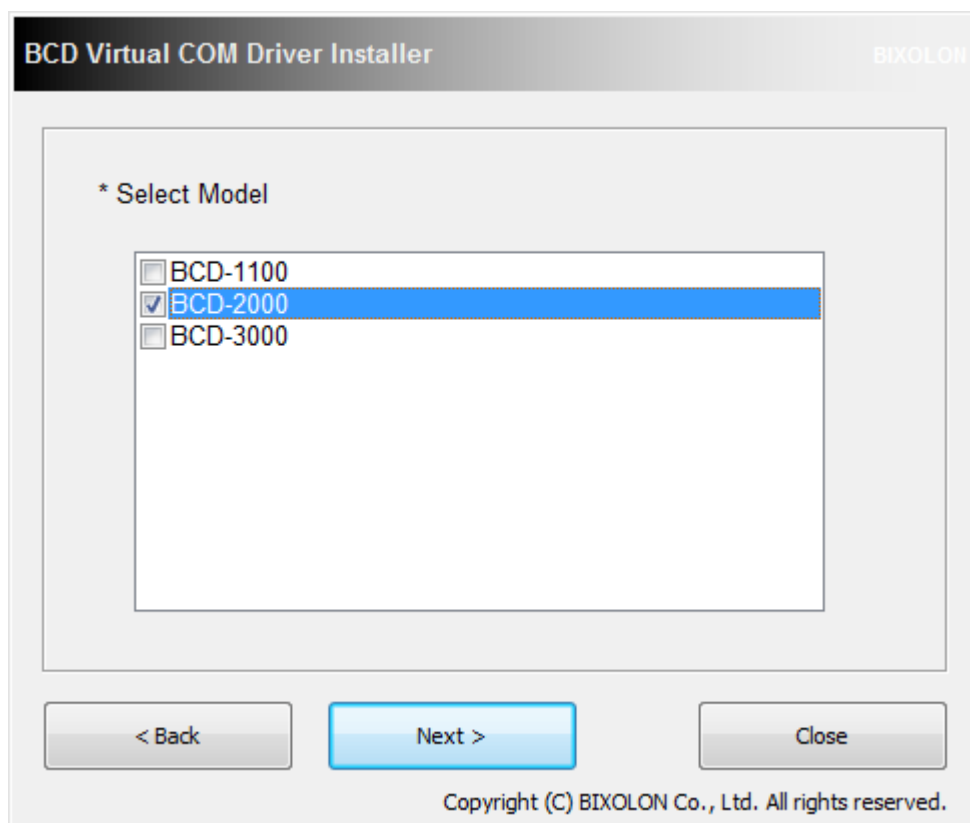
- 2) Select a device to add in Available Device List and click “Select” button.
- 3) In case of connection by using a USB cable, it is necessary to install VCOM (Virtual COM) Driver. In case of connection by using a serial cable, select No (only Windows OS supported).



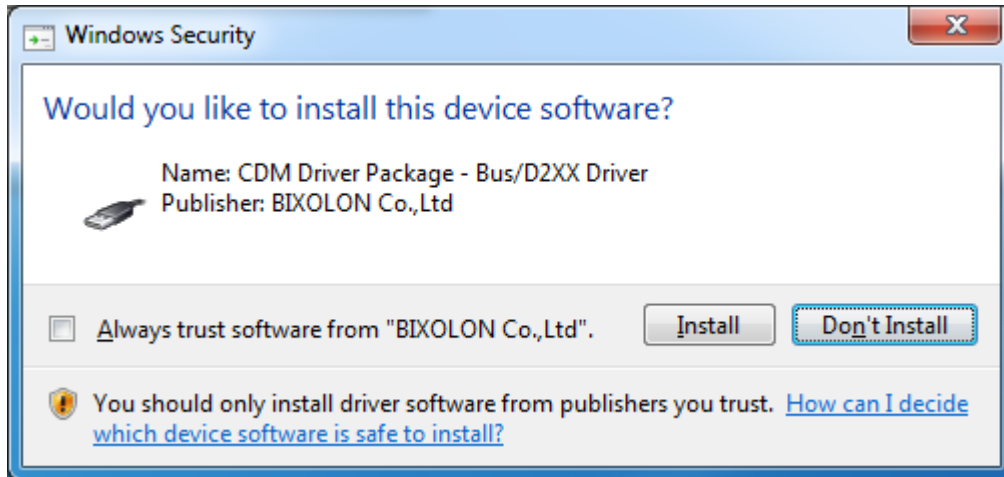
- 4) When Yes is selected, the following window is popped up. Select “Install Drivers” and click “Next” button.



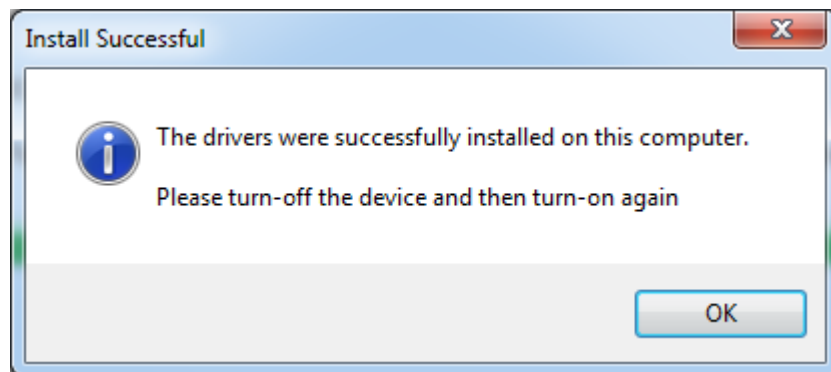
- 5) Select the name of a connected device and click “Next” button to start installation.



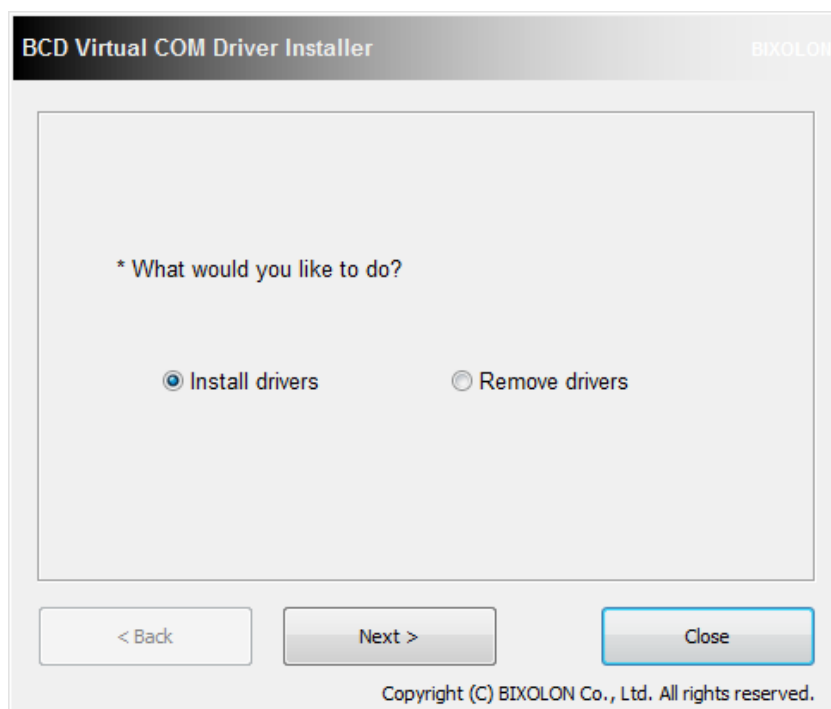
6) When the following window is popped up, select “Install” to proceed.



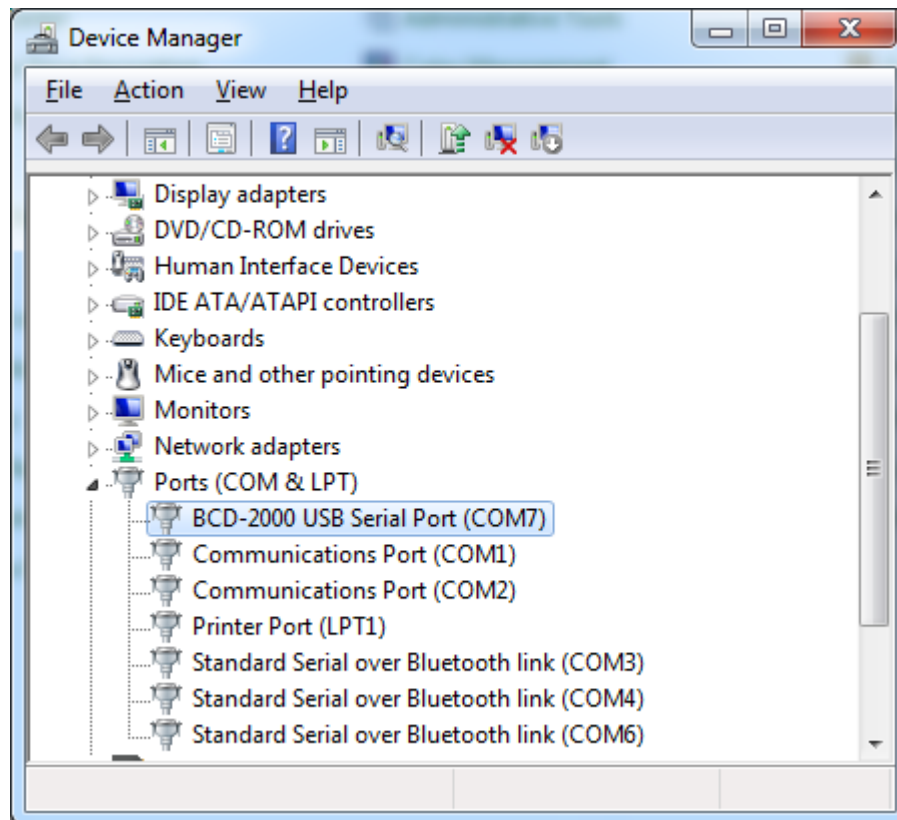
7) When installation completes, the following window is popped up. Select “OK” button and turn off the power and then on again.



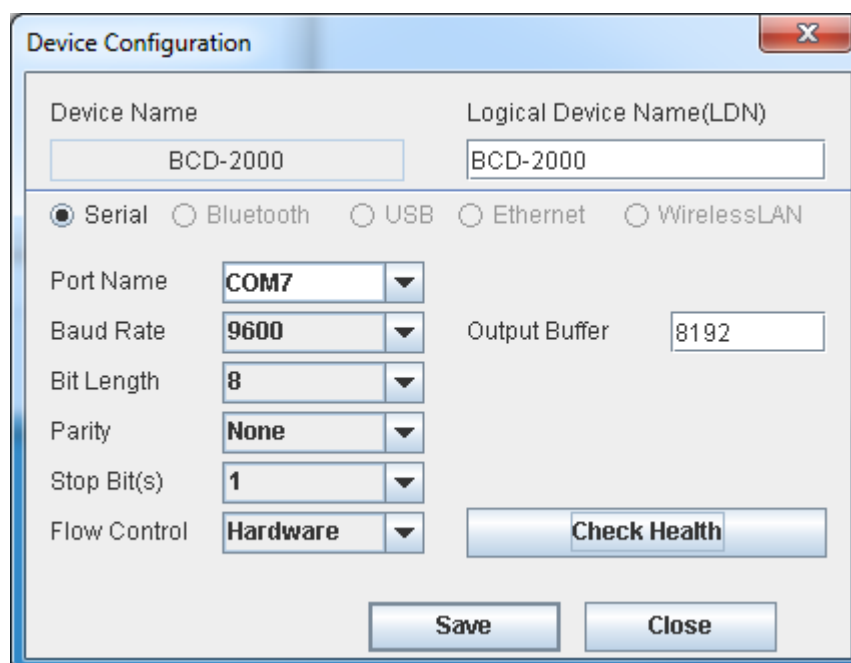
8) Select “Close” button on VCOM Driver installation screen to complete installation.



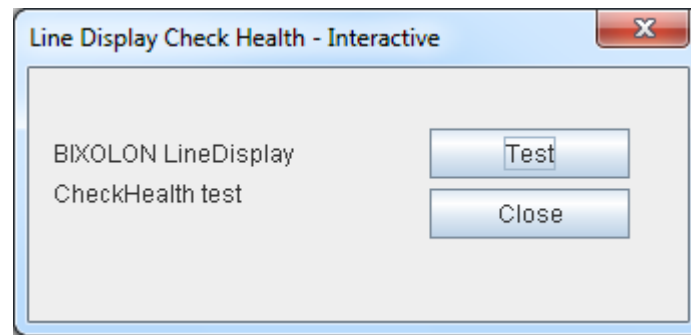
9) Check COM port number assigned in Control Panel – Device Manager.



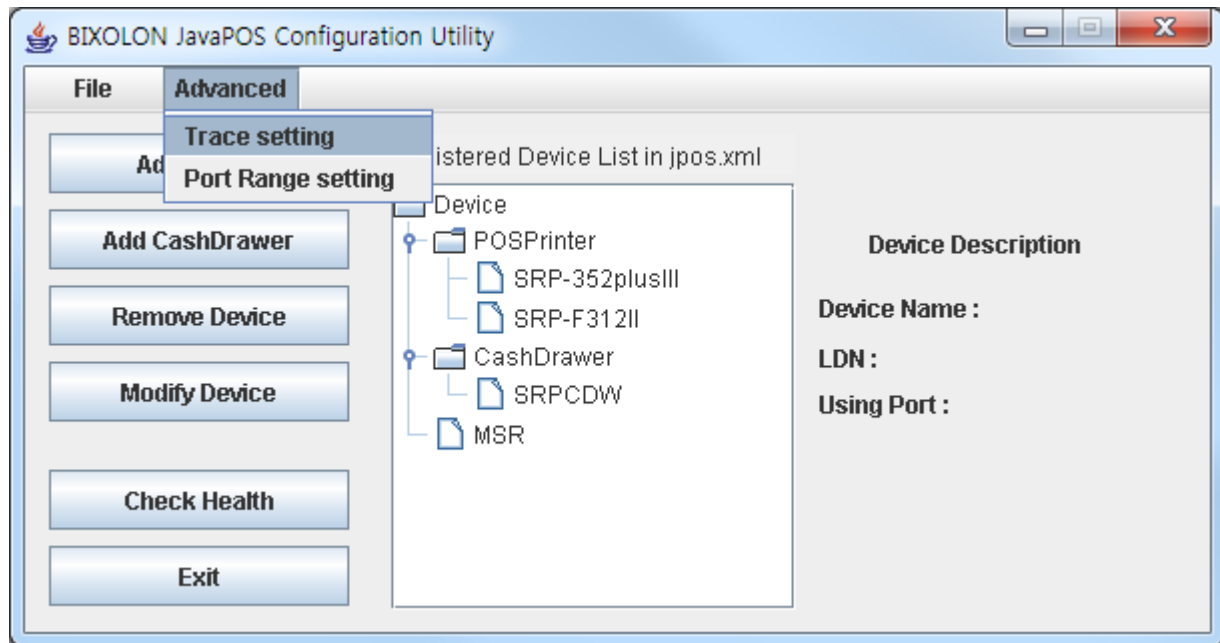
- 10) Set communication environment and setting value of the connected device on the device setting screen and select “Save” button.



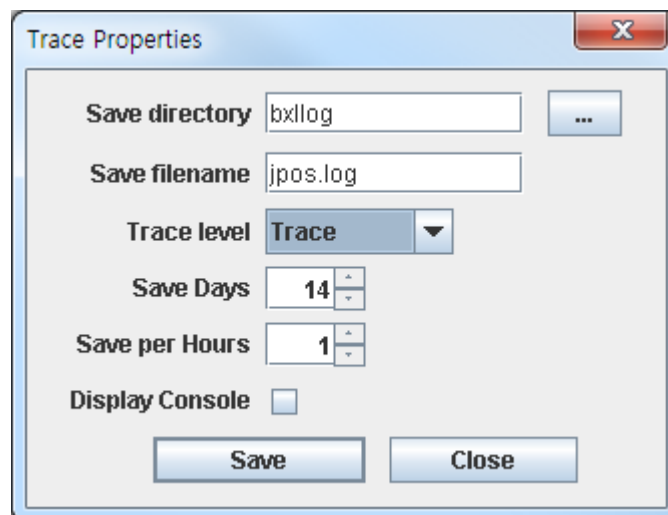
- 11) Select “Check Health” button and check if communication with LineDisplay is normally conducted.



## 4-5 Trace Setting



Select the trace level in combobox and click “Save” button.

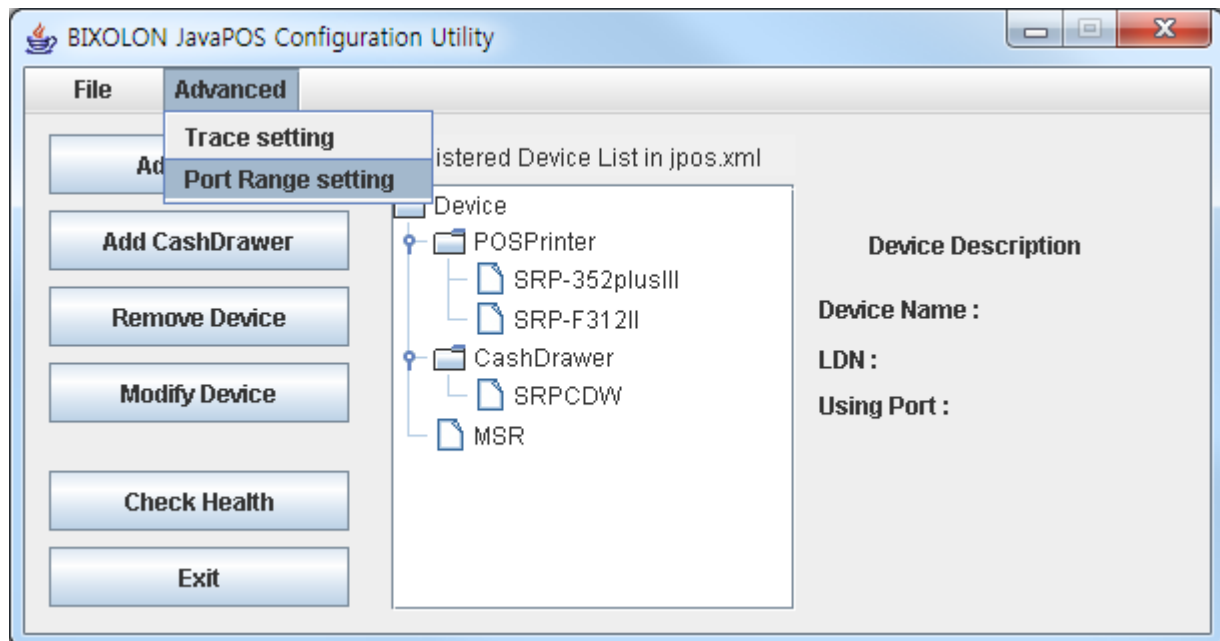
**Note**

- Please set the trace setting when it's necessary only. Otherwise Hard Drive capacity will be lack of containing other files due to the trace function.

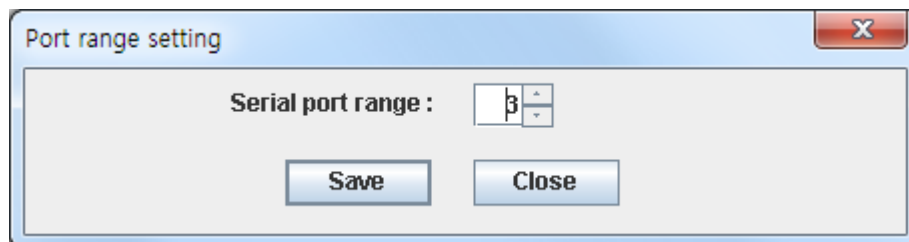


#### 4-6 Port Range Setting

'Port Range setting' can be adjustable according to the Serial or Bluetooth communication setting option. So, adjust the port number if there's no available port in system.

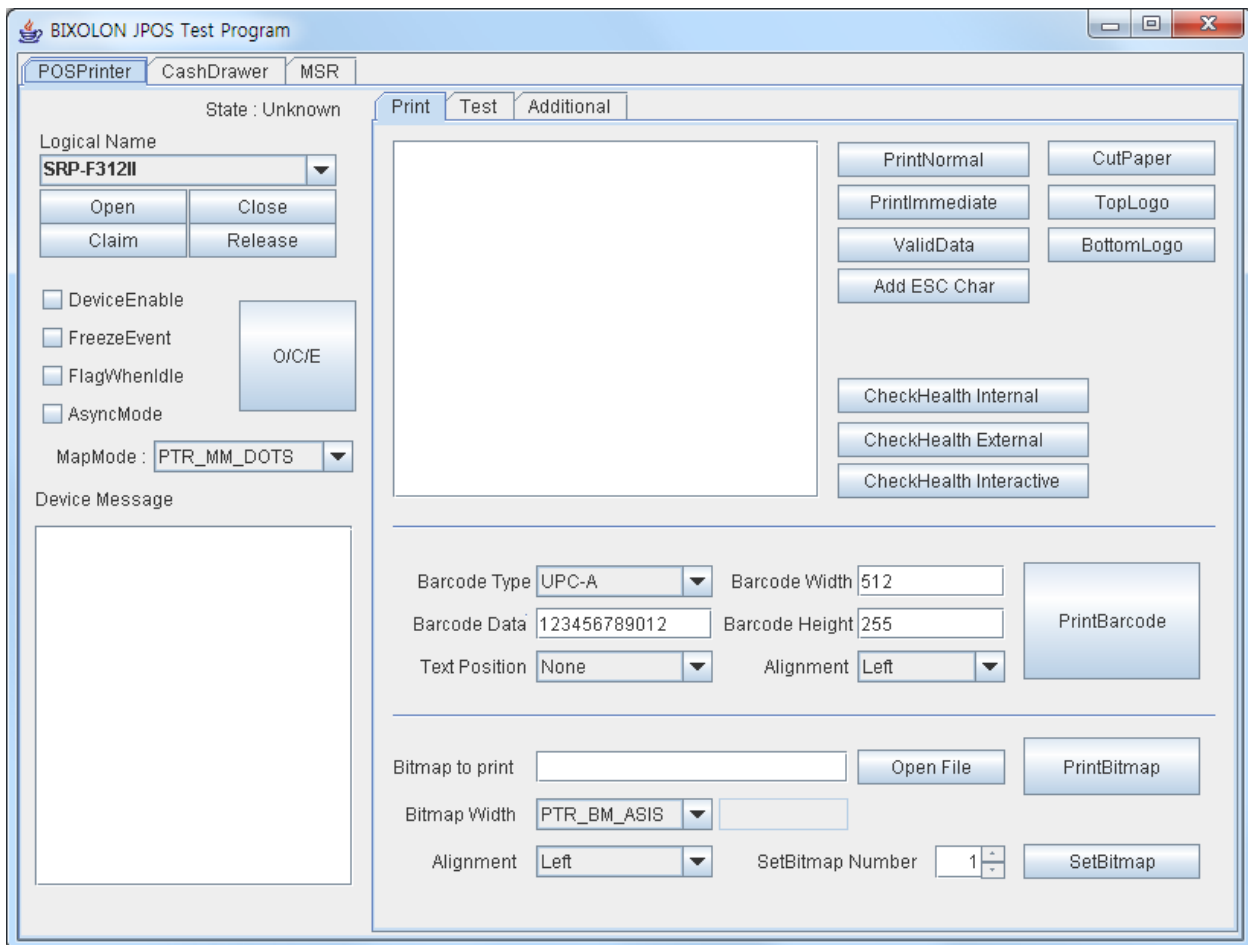


Input the maximum COM port number for Serial or Bluetooth communication.



## 5. Bixolon JPOS Test Program

Double click “bixolon-testprogram.bat”. The JavaPOS test program begins.



- 1) Logical Name: Select the test device in the list.
- 2) Click “Open” button to open JavaPOS device service.
- 3) Click “Claim” button to check the status of device.
- 4) Check “Device enabled” check box.
- 5) You can test each function with each button.

## 6. Sample Source

The content of the “Sample Source” folder is as follows.

- sampleimage.bmp : sample image
- \*.java : java source file

### 6-1 POS Printer Samples

- |                               |  |
|-------------------------------|--|
| 1) PrintNormalSample. java    | PrintNormal function sample source     |
| 2) PrintBitmapSample. java    | PrintBitmap function sample source     |
| 3) PrintBarcodeSample. Java   | PrintBarcode function sample source    |
| 4) CutPaperSample. java       | CutPaper function sample source        |
| 5) ESCSequenceSample. java    | ESC Sequence sample source             |
| 6) CheckHealthSample. java    | CheckHealth function sample source     |
| 7) POSPrinterEventSampe. java | POSPrinter-related event sample source |

### 6-2 CashDrawer Samples

- |                                 |  |
|---------------------------------|--|
| 1) OpenCashdrawerSample. java   | Opendrawer function sample source      |
| 2) CashdrawerEventsSample. java | Cashdrawer-related event sample source |

## **7. Precautions**

- The BIXOLON JavaPOS software package that is installed supports devices offered by BIXOLON. Normal operation is not guaranteed when used with other devices.
- Errors in operation may occur if installed with another JavaPOS Driver.
- If an unknown issue occurs, either contact the dealer or submit an inquiry at the website below for fast response. [www.bixolon.com](http://www.bixolon.com)

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## **Warning - U.S.A**

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## **Notice - Canada**

This Apparatus complies with class “A” limits for radio interference as specified in the Canadian department of communications radio interference regulations. Get appareil est conforme aux normes class “A” d’interference radio tel que specifier par ministre canadien des communications dans les reglements d’interference radio.

## **Caution**

Some semiconductor devices are easily damaged by static electricity. You should turn the printer “OFF”, before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer “OFF”.

## Revision history

[illegible]