



USER MANUAL

MiniMag Readers Models IDMB USB-HID KB, USB-HID, RS232/USBCDC, or PS/2

JPOS SERVICE OBJECT REFERENCE

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Revision History

Revision Date	Description
02/20/06	Initial Draft
02/28/06	Add USB HID connector support
03/01/06	General edits
05/17/06	Add RS232/USBCDC connector support
06/21/06	General edit
02/23/07	Supporting JRE 1.4
05/31/07	Up-dated Version 1.9.16

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Introduction

This document provides information for using JPOS Service Object (SO) for MiniMag readers with model number IDMB. Visit the ID TECH website at <http://www.idtechproducts.com> for additional information on readers.

System Requirements:

This JPOS SO program is for Windows 98, Windows 2000 and Windows XP.

Reference Document:

1. Unified POS Retail Peripheral Architecture Version 1.9 RC1 December 1, 2004
2. International Standard for Implementation of Point Of Service Peripherals

Environment Build

Install JRE 1.4, 1.5 or JDK 5.0:

Download the newest JRE 1.5 installation package from:

<http://java.sun.com/j2se/1.5.0/download.jsp>, then click: [Download JDK 5.0 Update](#) and select a proper platform JDK version to download. Install the package and make sure the "java" command functions properly. There may be a need to add the JRE bin directory into the system environments variables by following steps:

For MS Windows 2K/XP

1. right click "My Computer" in the desktop
2. select the "properties" menu item
3. select "Advanced" tab
4. click button "Environment Variables"
5. select "Path" and insert the JRE bin directory.

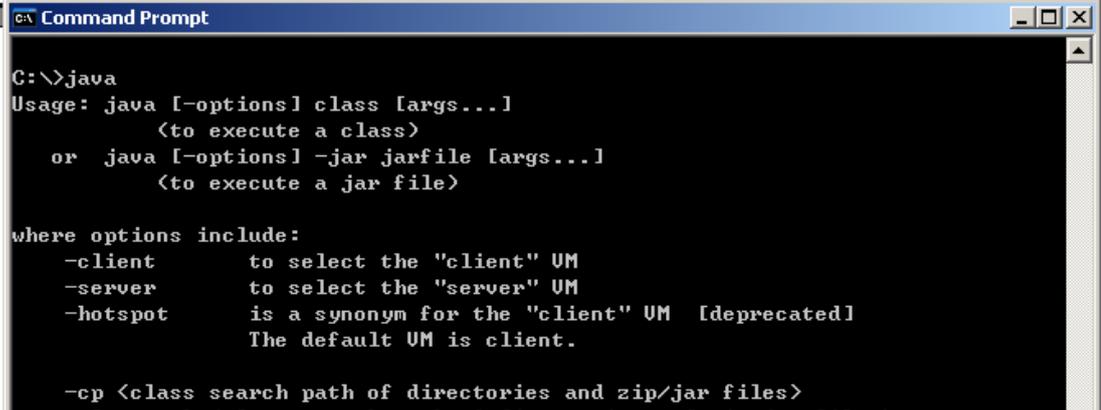
For MS Window 98

Add a line into to "Autoexec.bat" in the system directory:

```
PATH=%PATH%;JRE or JDK Bin Dir
```

Then reboot the system.

When Java is working, following can be observed:



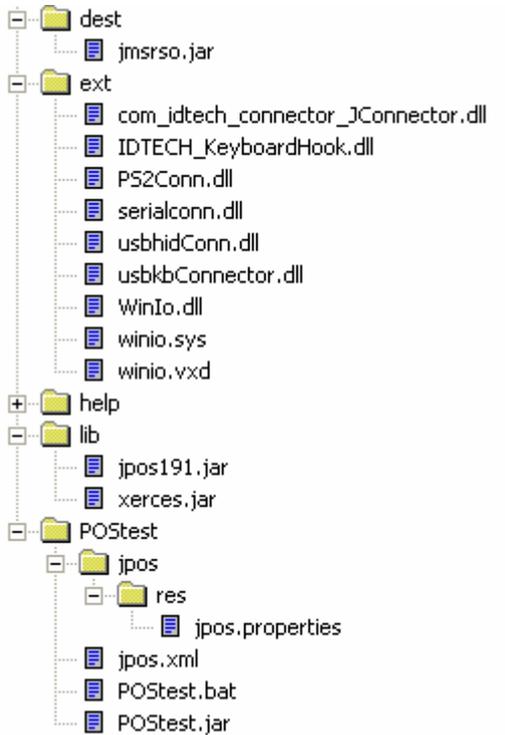
```
C:\>java
Usage: java [-options] class [args...]
        (to execute a class)
    or java [-options] -jar jarfile [args...]
        (to execute a jar file)

where options include:
    -client    to select the "client" VM
    -server    to select the "server" VM
    -hotspot   is a synonym for the "client" VM [deprecated]
               The default VM is client.

    -cp <class search path of directories and zip/jar files>
```

Enter DOS command shell, and enter java. It shows information about how to use.

FILELISTS:



jmsrso.jar	JPOS device service control for Minimag II
jpos.xml	jpos configure file
jpos.properties	jpos configure file, this specifies jpos.xml
com_idtech_connector_JConnector.dll	JNI DLL extension
usbkbConnector.dll	extension DLL
PS2Conn.dll	Extension DLL for PS2 access
usbhidConn.dll	extension DLL to access usbhid
SerialConn.dll	extension DLL to access serial port or USB/CDC
IDTECH_KeyboardHook.dll	extension DLL
WinIO.dll	Extension DLL for PS2 access
WinIO.sys	Extension for PS2 access for Windows XP/2000
WinIO.vxd	Extension for PS2 access for Windows98

1. The .DLL should be located in the directory in the PATH environment specified. For example, if the current working directory is included in the PATH variable,

```
PATH=%PATH%;.\
```

So, the DLLs can be moved to current directory.

NOTE On Windows 98

WinIO.dll, WinIO.sys, WinIO.vxd should be placed in the same directory, and add the directory to environment PATH variable in file autoexec.bat at Windows directory. For Example the directory the WinIO.xxx located is c:\jpos\ext\, a line as following should add to file autoexec.bat

```
set PATH=c:\jpos\ext;%PATH%
```

then reboot the Windows 98

Device Name: the jpos.xml the JPOS register file, that specify the device names.

There are several entries in this file, with entry name:

- "defaultMSR"
- "IDTECH_MMII_USBKB"
- "IDTECH_MMII_USBHID"
- "IDTECH_MMII_RS232"
- "IDTECH_MMII_PS2"
- "IDTECH_MMII_USBCDC"

"defaultMSR"

this entry is a copy of one of other entry as the default name for POSTest program.

"IDTECH_MMII_USBKB",

The line: `<creation factoryClass="com.idtech.jpos.IDTJposServiceInstanceFactory" serviceClass="com.idtech.MinimagService" />` specifies the factory class and service class in this implementation.

The line: `<prop name="connector" type="String" value="usbkb/0acd/0520" />` specifies the connector driver name, and the configuration value. 0ACD is the ID TECH Vendor ID; 0520 is the product ID.

“IDTECH_MMII_USBHID”,

<prop name="connector" type="String" value="usbhid/0acd/0500"/>, 0ACD is the ID TECH Vendor ID; 0500 is the product ID.

“IDTECH_MMII_RS232”, “IDTECH_MMII_USBCDC”

This tow entries are same but the name. An additional COM port is presented if the USB CDC driver is installed.

The line:<prop name="connector" type="String" value="COM1/baud=9600/parity=N/data=8/stop=1"/> specify the serial port parameters. “COM1” stand for the port number. “baud=9600/parity=N/data=8/stop=1” means the serial port settings: baud rate 9600, none parity check, data bits are 8 bits, stop bits are 1 bit.

“IDTECH_MMII_PS2”,

<prop name="connector" type="String" value="ps2"/>

“ps2” is the all parameter.

2. jpos/res/jpos.properties

This file specify which configure file is used. By default, it specify the “jpos.xml” as the one.

3. Add jmsrso.jar to your CLASSPATH or specify it in the javac / java command.

```
set CLASSPATH=%CLASSPATH%;yourDir\jmsrso.jar
```

For example: jmsrso.jar is placed in c:\so,

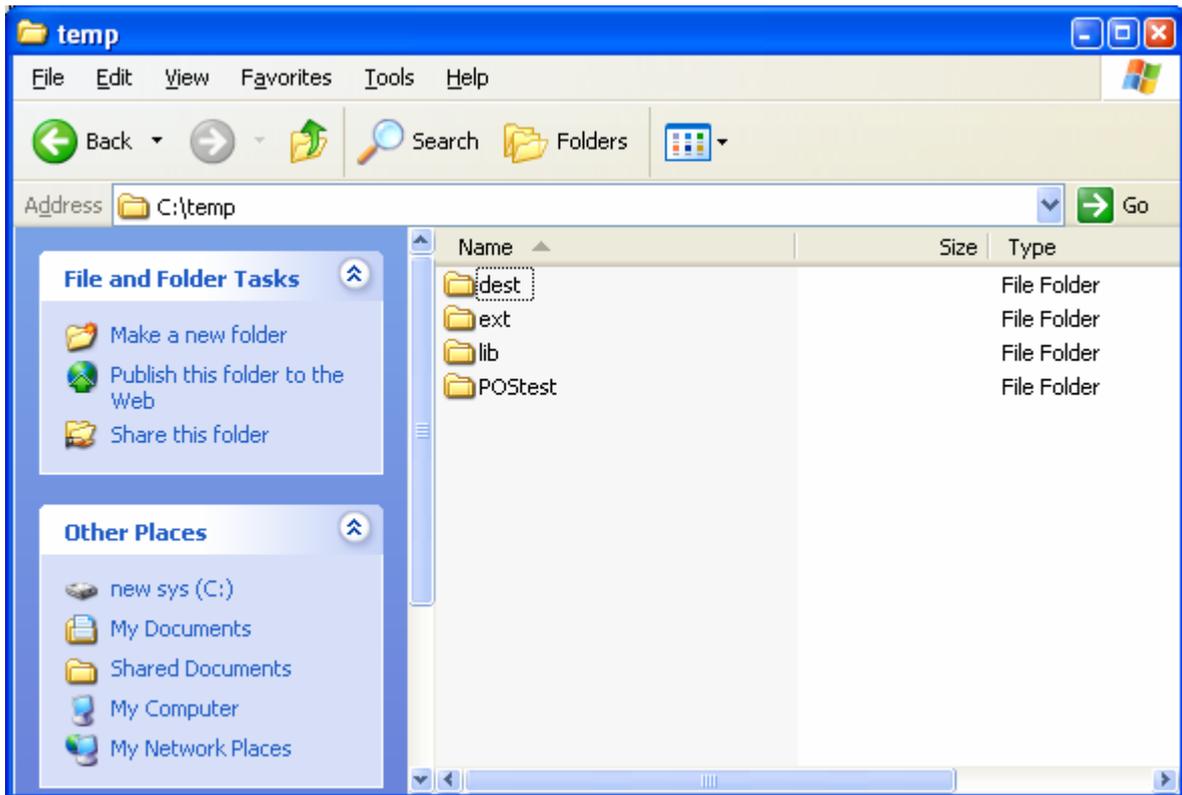
```
it should set CLASSPATH=%CLASSPATH%;c:\so\jmsrso.jar
```

Run POSTest

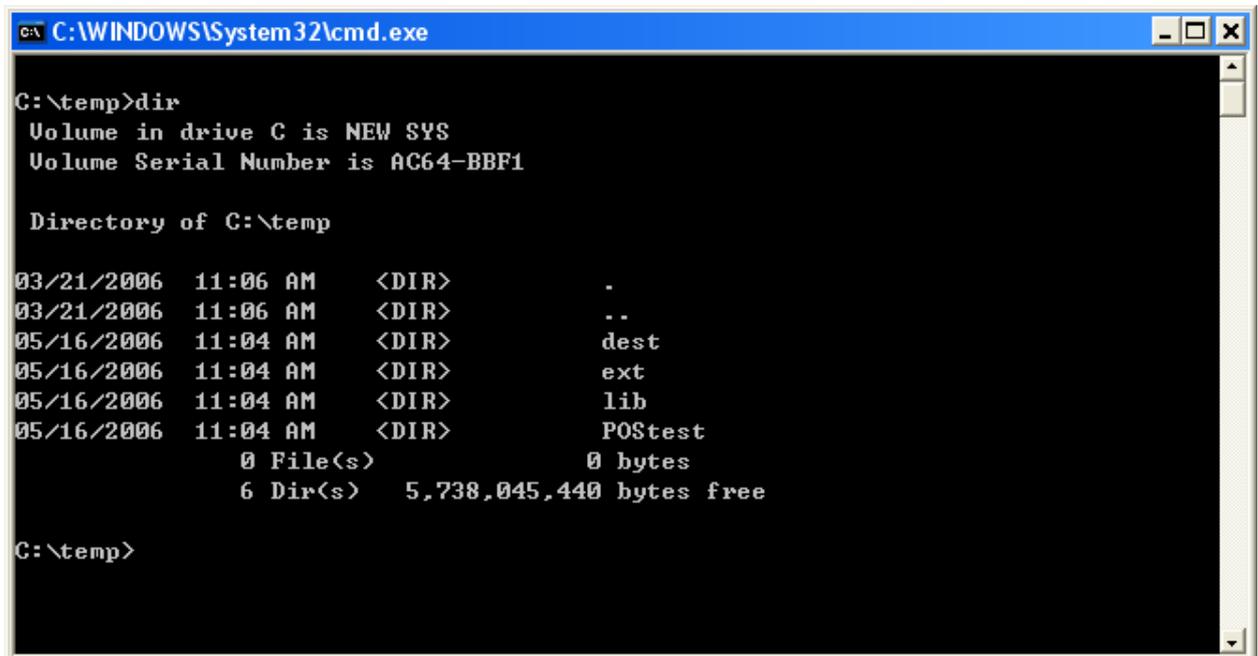
It's the official recommended JPOS compatible test program. The release version includes the program or it can be gotten from <http://sourceforge.net/projects/postest/>

1. unzip file "JPOS ServiceControl v01.000.zip" to a directory. Such as
c:\temp

The Directory is like the following:



Enter "c:\temp"Postest directory under the DOS command shell



```
C:\WINDOWS\System32\cmd.exe

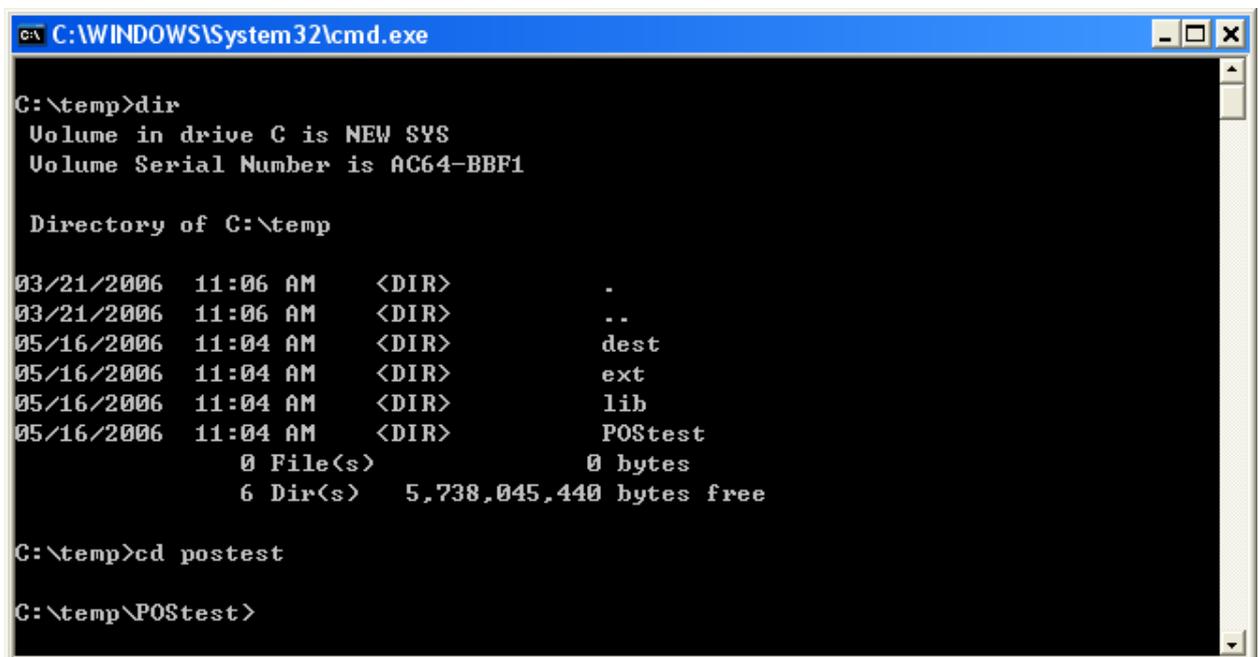
C:\temp>dir
Volume in drive C is NEW SYS
Volume Serial Number is AC64-BBF1

Directory of C:\temp

03/21/2006  11:06 AM    <DIR>          .
03/21/2006  11:06 AM    <DIR>          ..
05/16/2006  11:04 AM    <DIR>          dest
05/16/2006  11:04 AM    <DIR>          ext
05/16/2006  11:04 AM    <DIR>          lib
05/16/2006  11:04 AM    <DIR>          POStest
               0 File(s)                0 bytes
               6 Dir(s)  5,738,045,440 bytes free

C:\temp>
```

Then enter subdirectory "POStest"



```
C:\WINDOWS\System32\cmd.exe

C:\temp>dir
Volume in drive C is NEW SYS
Volume Serial Number is AC64-BBF1

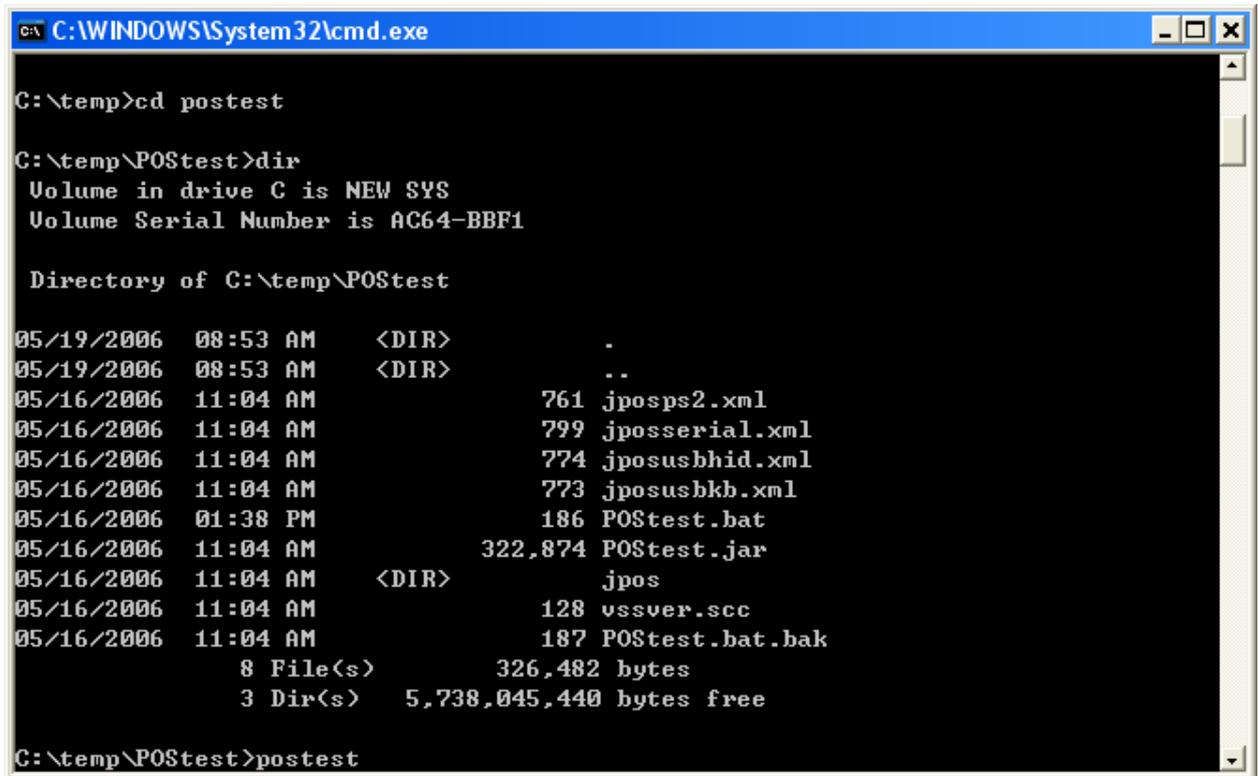
Directory of C:\temp

03/21/2006  11:06 AM    <DIR>          .
03/21/2006  11:06 AM    <DIR>          ..
05/16/2006  11:04 AM    <DIR>          dest
05/16/2006  11:04 AM    <DIR>          ext
05/16/2006  11:04 AM    <DIR>          lib
05/16/2006  11:04 AM    <DIR>          POStest
               0 File(s)                0 bytes
               6 Dir(s)  5,738,045,440 bytes free

C:\temp>cd postest

C:\temp\POStest>
```

2. To run POSTest just like following:



```
C:\WINDOWS\System32\cmd.exe

C:\temp>cd postest

C:\temp\POStest>dir
Volume in drive C is NEW SYS
Volume Serial Number is AC64-BBF1

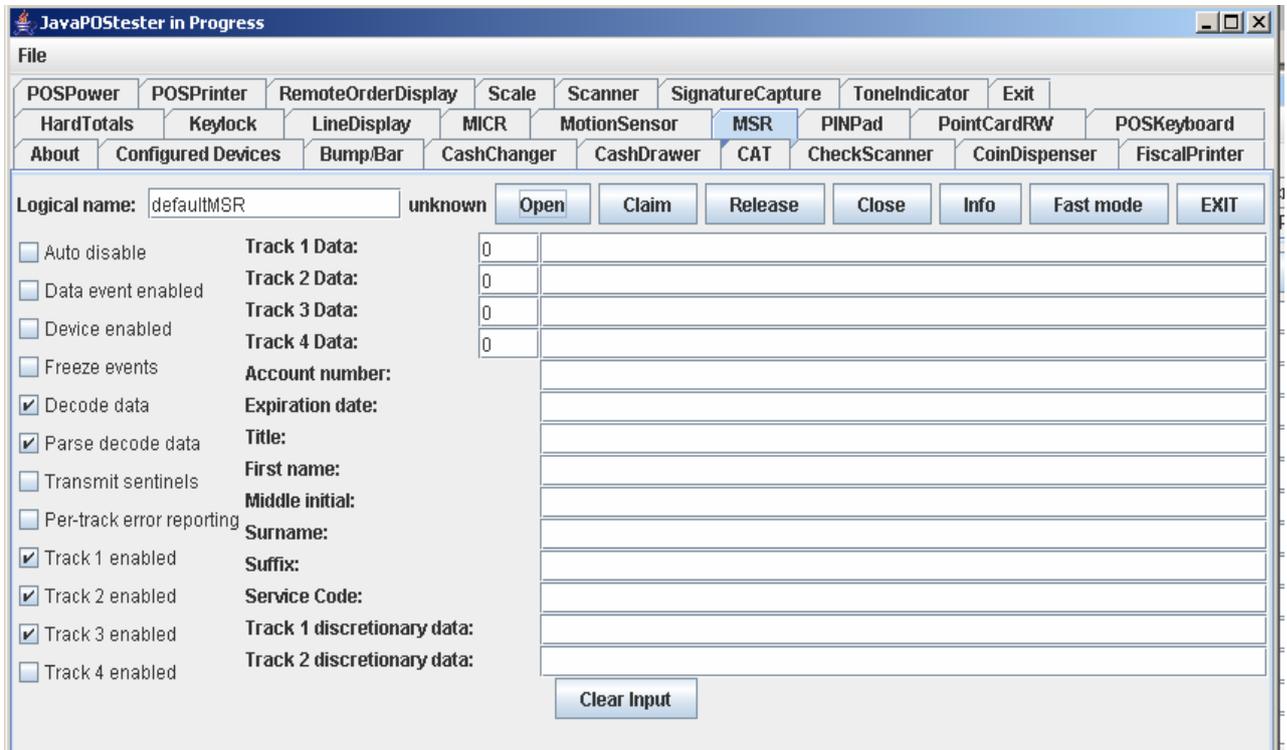
Directory of C:\temp\POStest

05/19/2006  08:53 AM    <DIR>          .
05/19/2006  08:53 AM    <DIR>          ..
05/16/2006  11:04 AM             761 jposps2.xml
05/16/2006  11:04 AM             799 jposserial.xml
05/16/2006  11:04 AM             774 jposusbhid.xml
05/16/2006  11:04 AM             773 jposusbkb.xml
05/16/2006  01:38 PM             186 POStest.bat
05/16/2006  11:04 AM          322,874 POStest.jar
05/16/2006  11:04 AM    <DIR>          jpos
05/16/2006  11:04 AM             128 vssver.scc
05/16/2006  11:04 AM             187 POStest.bat.bak
           8 File(s)          326,482 bytes
           3 Dir(s)      5,738,045,440 bytes free

C:\temp\POStest>postest
```

Then a POStester program screen is shown.

4. Click "Open" button, and "Claim", and three "beeps" should sound from the device.



5. Check choices "Data event enabled", "Device enabled"

JPOS Service Object Reference, Model IDMB Reader

The screenshot shows the 'JavaPOStester in Progress' application window. The title bar includes standard window controls. The menu bar contains 'File'. Below the menu bar is a toolbar with various device categories: POSPower, POSPrinter, RemoteOrderDisplay, Scale, Scanner, SignatureCapture, ToneIndicator, Exit, HardTotals, Keylock, LineDisplay, MICR, MotionSensor, MSR (highlighted), PINPad, PointCardRW, POSKeyboard, About, Configured Devices, Bump/Bar, CashChanger, CashDrawer, CAT, CheckScanner, CoinDispenser, and FiscalPrinter. The main window area is divided into several sections:

- Logical name:** defaultMSR, unknown. Buttons: Open, Claim, Release, Close, Info, Fast mode, EXIT.
- Configuration checkboxes:**
 - Auto disable
 - Data event enabled
 - Device enabled
 - Freeze events
 - Decode data
 - Parse decode data
 - Transmit sentinels
 - Per-track error reporting
 - Track 1 enabled
 - Track 2 enabled
 - Track 3 enabled
 - Track 4 enabled
- Data entry fields:**
 - Track 1 Data: 0
 - Track 2 Data: 0
 - Track 3 Data: 0
 - Track 4 Data: 0
 - Account number:
 - Expiration date:
 - Title:
 - First name:
 - Middle initial:
 - Surname:
 - Suffix:
 - Service Code:
 - Track 1 discretionary data:
 - Track 2 discretionary data:
- Clear Input** button.

6. Observe the text field and swipe a card.

JPOS Service Object Reference, Model IDMB Reader

The screenshot shows the 'JavaPOStester in Progress' application window. The 'MSR' tab is selected in the menu bar. The 'Logical name' is 'defaultMSR' and the status is 'unknown'. The application displays various configuration options and a data table.

<input type="checkbox"/> Auto disable	Track 1 Data:	79	B5286306682150011^KING/VICTORIA E	^9901101000000114000000833000000
<input type="checkbox"/> Data event enabled	Track 2 Data:	39	5286306682150011=9901101000000114833	
<input checked="" type="checkbox"/> Device enabled	Track 3 Data:	0		
<input type="checkbox"/> Freeze events	Track 4 Data:	0		
<input checked="" type="checkbox"/> Decode data	Account number:		5286306682150011	
<input checked="" type="checkbox"/> Parse decode data	Expiration date:		9901	
<input type="checkbox"/> Transmit sentinels	Title:			
<input type="checkbox"/> Per-track error reporting	First name:		VICTORIA	
<input checked="" type="checkbox"/> Track 1 enabled	Middle initial:			
<input checked="" type="checkbox"/> Track 2 enabled	Surname:		KING	
<input checked="" type="checkbox"/> Track 3 enabled	Suffix:			
<input type="checkbox"/> Track 4 enabled	Service Code:			
	Track 1 discretionary data:		101000000114000000833000000	
	Track 2 discretionary data:		101000000114833	

7. Click "Release" or "Close" to release or close the JPOS,

NOTE: This should be done to make sure the device returns to normal state.

8. click "EXIT" to quit the program.

For more detail please check the <http://www.javapos.com> and the release help files.

A Sample for using MSR JPOS

The following code is the sample:

```
import jpos.*;
import jpos.config.*;
import jpos.config.simple.*;
import jpos.loader.*;
import jpos.loader.simple.*;
import jpos.profile.*;
import jpos.services.*;
import jpos.util.*;
import jpos.util.tracing.*;

public class YourClass{

    public static void main(String [] args){
        MSR msr=new MSR(); /* new an instance */

        try{
            msr.open(TestConst.testdevicename);
        }catch(JposException e){
            System.err.print(e);
        }
        /**
         * Do something here.
         */
        try{
            msr.close();
        }catch(JposException e){
            System.err.print(e);
        }
    }
}
```