

POS Simulator

The POS Simulator can simulate 4 types of connections:

- ✧ **Dynamic LAN [DVR=Client POS=Server]**(Only Name has to remain fixed): 1 connection only, since the DVR only allows 1 connection per MAC Address.
- ✧ **Static LAN [DVR=Client POS=Server]** (IP and Port has to remain fixed): a maximum of 16 connections simultaneously.
- ✧ **Static LAN [DVR=Server POS=Client]** (IP and Port has to remain fixed): a maximum of 16 connections simultaneously.
- ✧ **RS-232:** 1 connection only.

It uses the opens a port(s) and wait for the DVR to connect using TCP Socket Protocol.

Requirements:

- ✧ OS: Windows.
- ✧ For LAN, the DVR with firmware must be 1.4.3 FR020 or higher.
- ✧ Disable the firewall (only for the POS LAN)

Enviroment:

- ✧ DVR and the PC with the Simulator must be in the same LAN. (only for POS LAN)
- ✧ If there is a router, make sure that the port you select is allowed to pass. (only for POS LAN)

Release dates & fixes:

- ✧ 2008-08-18 v2.0
- ✧ 2008-08-25 v2.1
 - Added Interval Time
 - Added VPON Logo
- ✧ 2008-09-23 v2.2
 - Added Static LAN (DVR=Server POS=Client)
- ✧ 2008-10-17 v2.3
 - Added Logs in txt files. Will dump automatically the Logs in a txt file when there are 900 entries and when you close the simulator.
 - Fixed bug: "error 380" (TextBox can't have more than 500 multilines)

✧ 2009-1-2 v2.5

- Added RS-232 Simulator
- Added User Configurable Text
- Fixed Sending 60 Messages of Text instead of 61

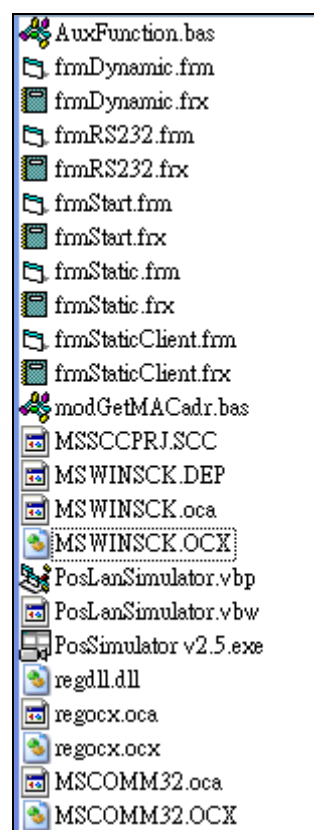
Notes:

- ✧ (DYNAMIC) The Registry Server won't allow 2 entries with same IP and/or MAC Address. So DO NOT TRY TO open 2 simulators in the same PC to connect to the same DVR , it won't work. (But 2 simulators in the same PC connecting to 2 different DVRs will work).

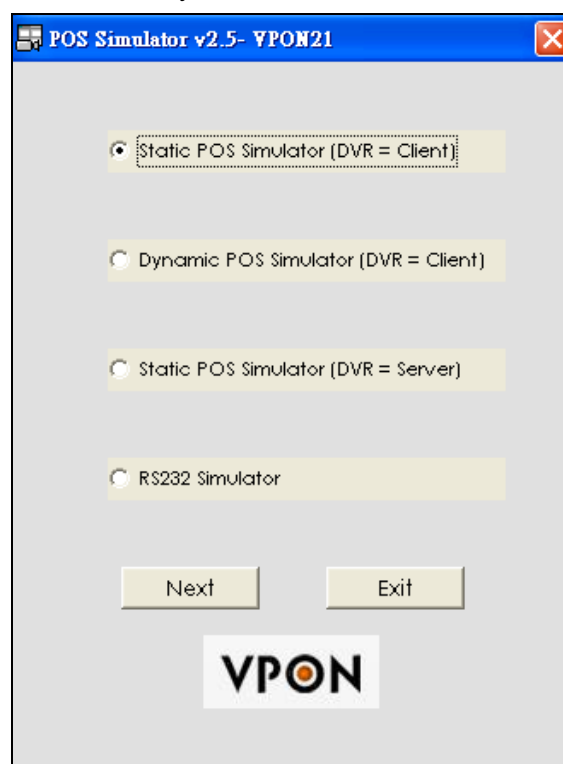
Known Bugs of the FW 02X:

- ✧ When the DVR can't connect to a POS Machine, this will produce random small freezes for a few seconds. As the number of disconnected POS Machine increases, so will the maximum freezing time. (All things related to the POS will be affected, f.e., POS text, POS configuration menu).
- ✧ 9- split mode, the channel 9 won't show POS text, although in 1 split mode and 16 split mode the text does appear.
- ✧ When there are a lot of POS machines connected to the DVR, occasional disconnections will happen.
- ✧ POS LAN 16 doesn't get the Data, although the connection is established.

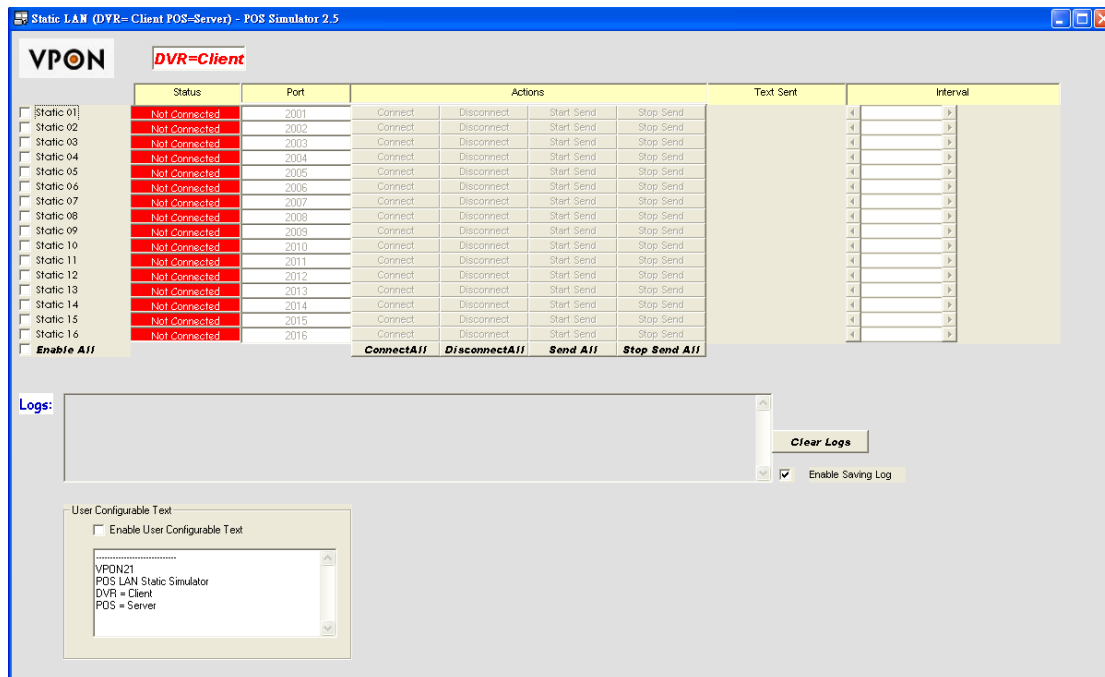
1. Click on "POS LAN Simulator.exe" to run the program.



2. Select the kind of POS Simulator you need:



❖ Static POS Simulator (DVR = **Client**)



- ❖ **Static 01 ~ Static 16:** Enable the selected POS
- ❖ **Enable All:** Enable all the POS channels.
- ❖ **Status:** There are 4 :
 - I. **“Not Connected”:** When there are no connections established. It is allowed only in this state to change the port number of the enabled POS channels.
 - II. **“Listening”:** Trying to establish a connection with the DVR.
 - III. **“Connected”:** The connection with the DVR is successfully established.
 - IV. **“Sending”:** The connection with the DVR is successfully established and the POS Data is being sent.
- ❖ **Port:** You can change the port. You are allowed to do this only in the state “Not Connected” and if you had already enabled the POS channel.
- ❖ **Connect:** Clicking this button will begin establishing the connection of the current POS channel with the DVR.
- ❖ **Connect All:** Clicking this button will begin establishing the connection of **all** the enabled POS channels.
- ❖ **Disconnect or Stop Connecting:** Will terminate the connection of the selected POS channel.
- ❖ **Disconnect all:** Will terminate all the connections.
- ❖ **Start send:** Clicking this button will start with the sending. This button will be enabled only if the selected POS channel is in “Connected” Status.
- ❖ **Send All:** Clicking this button will start with all the sending of the connected POS Channels.

- ✧ **Stop Send:** Will stop the POS channel in "Sending" status.
- ✧ **Stop Send All:** Will stop all the POS channels in "Sending" Status.
- ✧ **Text Send:** The data that the POS Simulator sends.
There are two types:
 - ✧ *Auto Text:* It has the following format.
 POS Nr N: X
 N: Number of the POS channel. It ranges from 1 to 16.
 X: Number from 1 to 60.
 It will increase a number (X) **every period of Interval time**.
 - ✧ *Manual Text:* Manually configured by the user. Have to Enable "Enable User Configurable Text" to activate it. It will send a line **every period of Interval time**.
- ✧ **Interval:** Change the period in which the POS data are sent.
- ✧ **Logs:** This will show the logs.
- ✧ **Clear Logs:** It will clear the logs.
- ✧ **Enable Saving Logs:** By default, enabled. It is to specify whether you want to save into a .txt file the logs of the simulator.
- ✧ **Enable User Configurable Text:** Enable to deactivate the "Auto Text" mode and activate the "Manual Text" Mode.

Enter the desired text. Take into consideration the maximum number of characters that the DVR can allow per line. ALWAYS PRESS "ENTER" TO CHANGE THE LINE.

1. Enable the quantity (1 to 16) you want to simulate or select "**Enable All**" to activate all the 16 POS channels.

	Status	Port	
<input type="checkbox"/> Static 01	Not Connected	1001	Connect
<input type="checkbox"/> Static 02	Not Connected	1002	Connect
<input type="checkbox"/> Static 03	Not Connected	1003	Connect
<input type="checkbox"/> Static 04	Not Connected	1004	Connect
<input checked="" type="checkbox"/> Static 05	Not Connected	1005	Connect
<input type="checkbox"/> Static 06	Not Connected	1006	Connect
<input type="checkbox"/> Static 07	Not Connected	1007	Connect
<input type="checkbox"/> Static 08	Not Connected	1008	Connect
<input checked="" type="checkbox"/> Static 09	Not Connected	1009	Connect
<input type="checkbox"/> Static 10	Not Connected	1010	Connect
<input type="checkbox"/> Static 11	Not Connected	1011	Connect
<input checked="" type="checkbox"/> Static 12	Not Connected	1012	Connect
<input checked="" type="checkbox"/> Static 13	Not Connected	1013	Connect
<input type="checkbox"/> Static 14	Not Connected	1014	Connect
<input type="checkbox"/> Static 15	Not Connected	1015	Connect
<input type="checkbox"/> Static 16	Not Connected	1016	Connect
<input type="checkbox"/> Enable All			ConnectAll

2. Change the port number you want or use the default ones (1001 to 1016) and click on

“Connect” to begin the communication.

- The “Status” will change to “Listening” and after a successful connection, it will start sending the data.

The screenshot shows the 'Static LAN Simulator 2.1' window. It features a table with columns for Status, Port, Actions, Text Sent, and Interval. The table lists 16 static ports (Static 01 to Static 16). Static 01 is 'Sending', Static 02 is 'Listening', and all other ports are 'Not Connected'. The 'Actions' column for each port includes 'Connect', 'Disconnect', 'Start Send', and 'Stop Send'. The 'Text Sent' column shows 'POS#1:2' for Static 01 and Static 02. The 'Interval' column shows '1000 milliseconds' for Static 01 and Static 02. Below the table, there are buttons for 'CONNECT All', 'Disconnect All', 'Send All', and 'Stop Send All'. A 'Logs' section at the bottom left shows a list of log entries with timestamps and messages. A 'Clear Logs' button is located to the right of the logs.

Status	Port	Actions	Text Sent	Interval
Sending	1001	Connect Disconnect Start Send Stop Send	POS#1:2	1000 milliseconds
Listening	1002	Connect Disconnect Start Send Stop Send	POS#1:2	1000 milliseconds
Not Connected	1003	Connect Disconnect Start Send Stop Send		
Not Connected	1004	Connect Disconnect Start Send Stop Send		
Not Connected	1005	Connect Disconnect Start Send Stop Send		
Not Connected	1006	Connect Disconnect Start Send Stop Send		
Not Connected	1007	Connect Disconnect Start Send Stop Send		
Not Connected	1008	Connect Disconnect Start Send Stop Send		
Not Connected	1009	Connect Disconnect Start Send Stop Send		
Not Connected	1010	Connect Disconnect Start Send Stop Send		
Not Connected	1011	Connect Disconnect Start Send Stop Send		
Not Connected	1012	Connect Disconnect Start Send Stop Send		
Not Connected	1013	Connect Disconnect Start Send Stop Send		
Not Connected	1014	Connect Disconnect Start Send Stop Send		
Not Connected	1015	Connect Disconnect Start Send Stop Send		
Not Connected	1016	Connect Disconnect Start Send Stop Send		

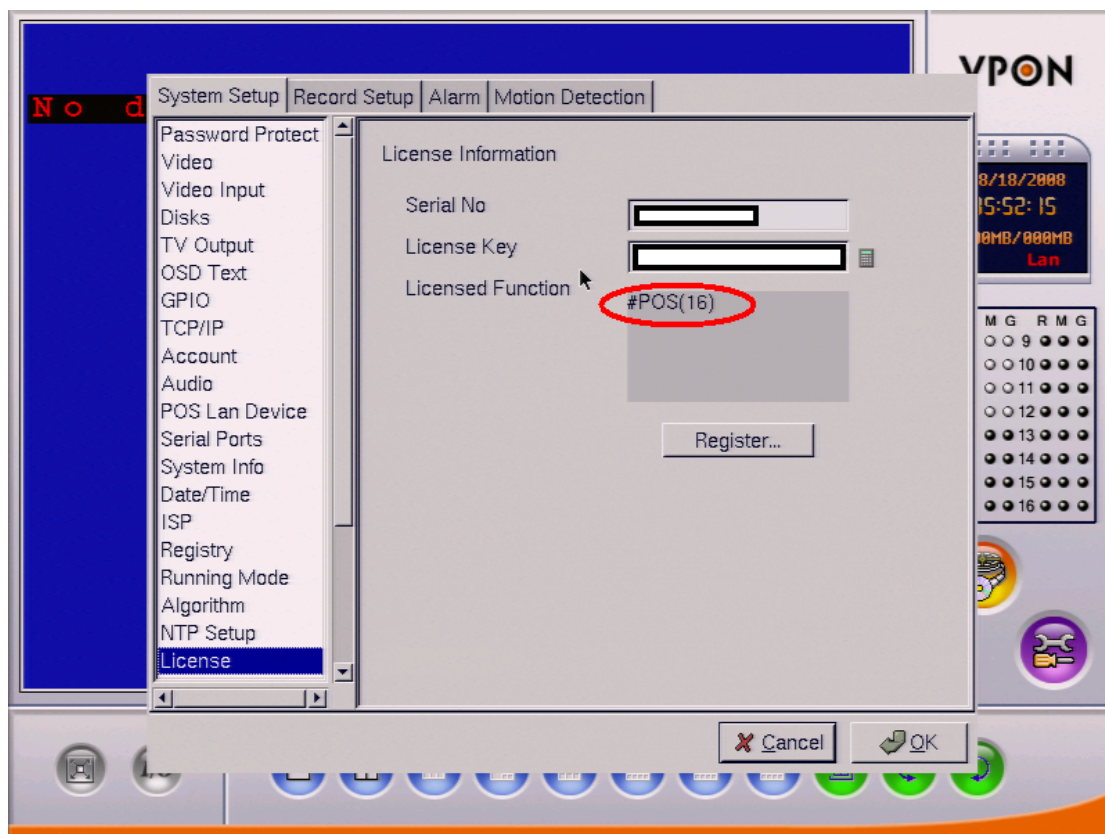
Logs:

- 8/25/2008 1:46:28 PM POS #1: Interval Time set in 1000 milliseconds.
- 8/25/2008 1:46:28 PM POS #1: Listening in port #1001.
- 8/25/2008 1:46:29 PM POS #2: Interval Time set in 1000 milliseconds.
- 8/25/2008 1:46:29 PM POS #2: Listening in port #1002.
- 8/25/2008 1:46:30 PM POS #1: Connected.
- 8/25/2008 1:46:30 PM POS #1: Start Transmitting

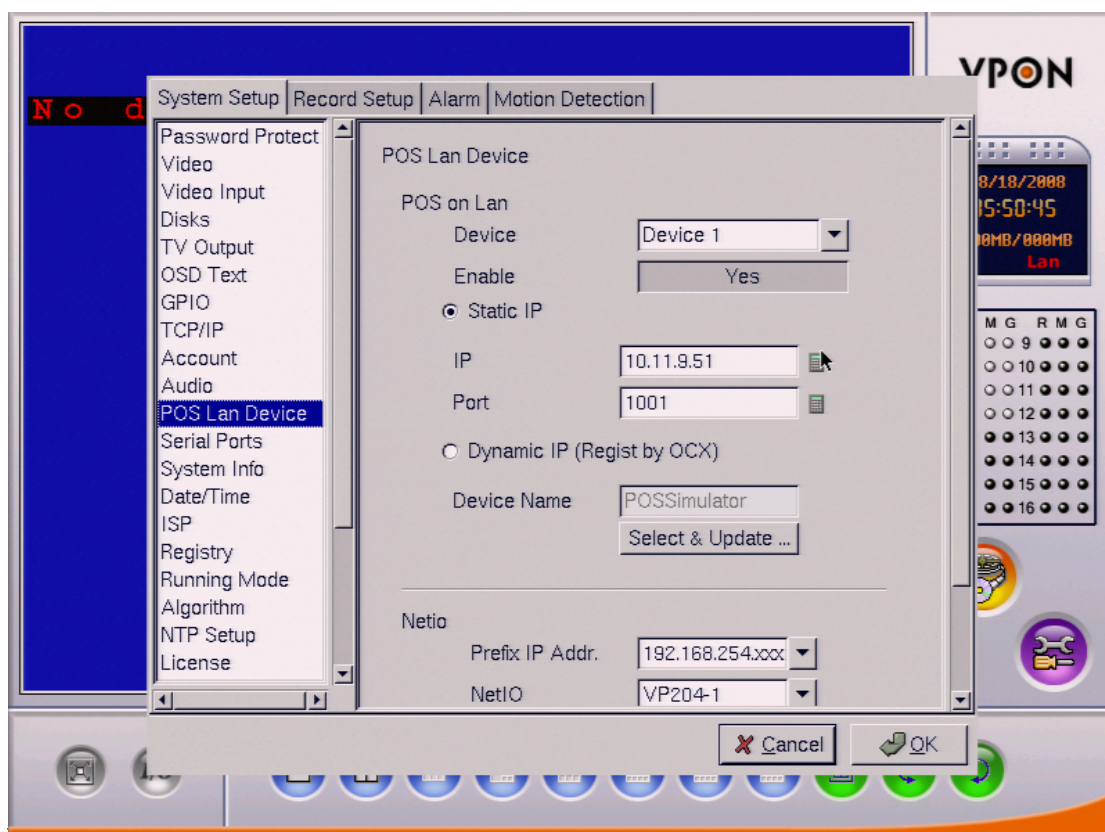
Clear Logs

Configuration in the DVR for Static POS LAN:

- Please check first that you have the required POS License:



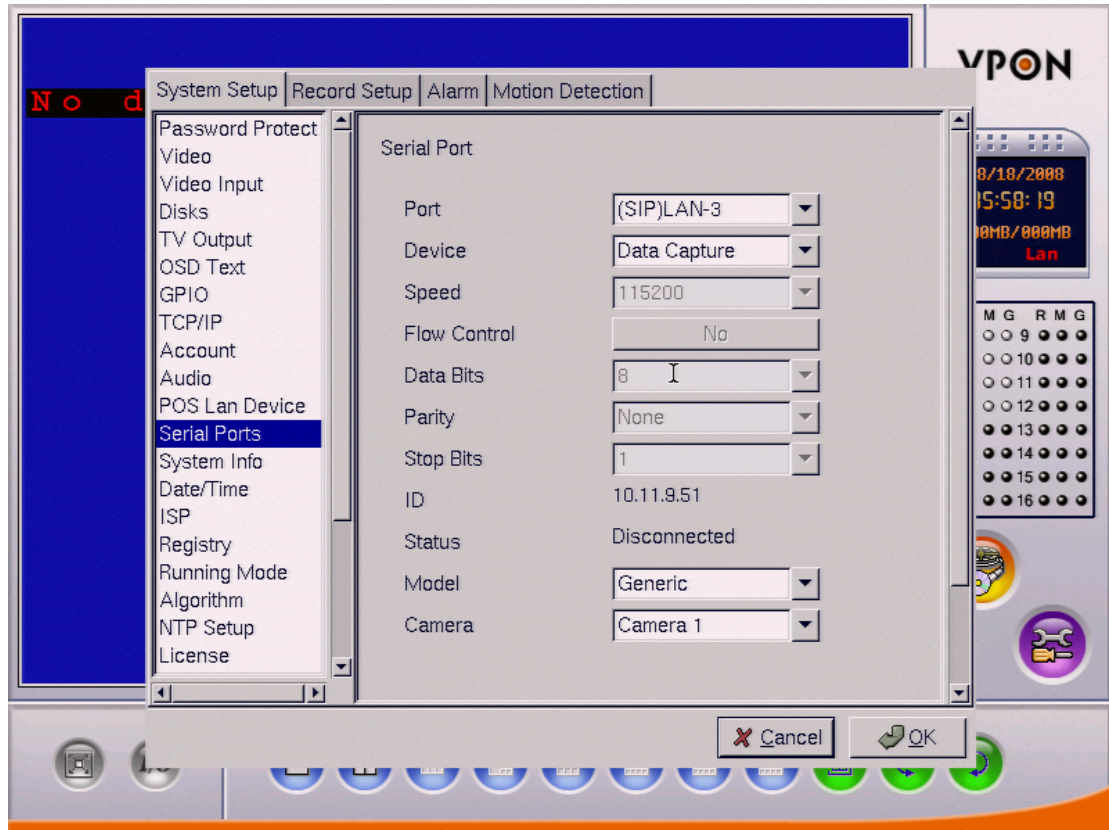
2. Go to "System Setup" -> "POS Lan Device", enable the Device and enter the IP and Port of the PC running the POS LAN Simulator. Then click "OK". The DVR will reboot after this operation.



- Go to "System Setup"->"Serial Ports". Select the appropriate LAN Device. (SIP= Static POS, DIP=Dynamic POS).

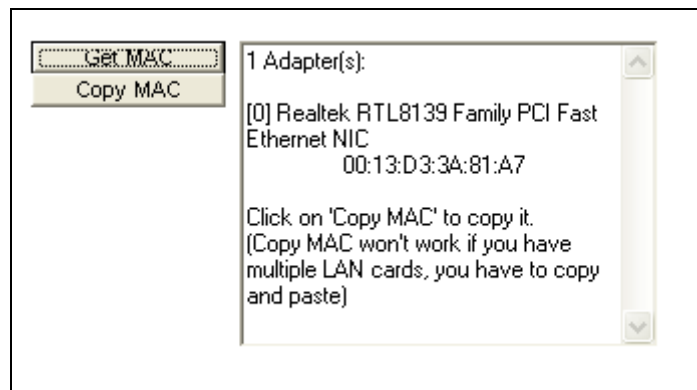
IMPORTANT:

Remember to change the device to "DATA capture", or the connection will never be established.



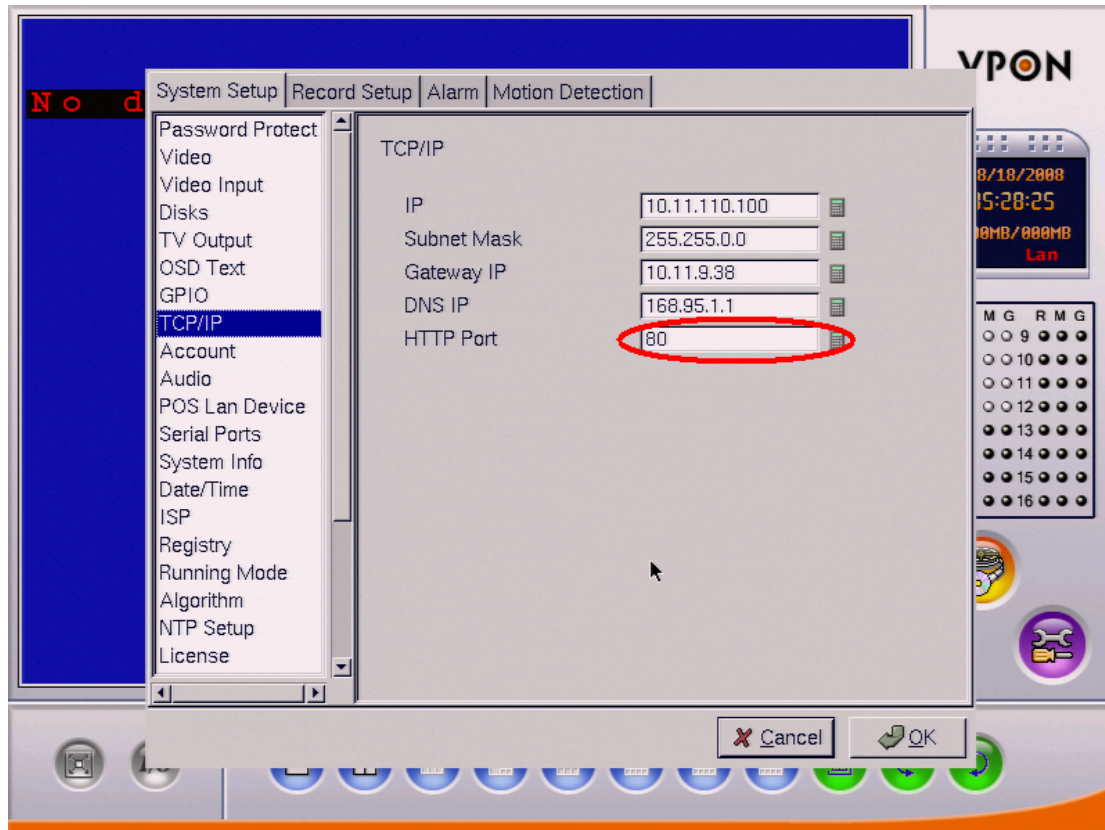
❖ Dynamic POS Simulator (DVR = **Client**)

- ❖ **My IP:** It will automatically get the IP of the PC. (Not Changeable)
- ❖ **My MAC:** Enter here the MAC Address.
- ❖ **Get MAC:** It will automatically get the MAC address of your LAN card. It will also enable the “Copy MAC” button.



- ❖ **Copy MAC:** It will copy the detected MAC to “My MAC”.
- ❖ **Name:** Enter the name that will identify your POS Machine.

- ✧ **My Port:** This number specifies which port our PC will open in order to accept incoming connections. (The number of the port must be under 30000)
- ✧ **IP Address of the DVR:** We specify here the IP of the DVR.
- ✧ **Registry Port of the DVR:** We specify the registry port of the DVR. (The number of the port must be under 30000). It must be the same as the port configured in the DVR



- ✧ **Register to the DVR:** By clicking this button, the POS machine will register to the DVR.
- ✧ **Connect:** Clicking this button will begin establishing the connection with the DVR.
- ✧ **Disconnect or Stop Connecting:** Will terminate the connection.
- ✧ **Start send:** Clicking this button will start with the sending. This button will be enabled only if the selected POS channel is in "Connected" Status.
- ✧ **Stop Send:** Will stop the transmission.
- ✧ **Text Send:** The data that the POS Simulator sends.

There are two types:

- ✧ **Auto Text:** It has the following format.

POS Nr N: X

N: Number of the POS channel. It ranges from 1 to 16.

X: Number from 1 to 60.

It will increase a number (X) **every period of Interval time**.

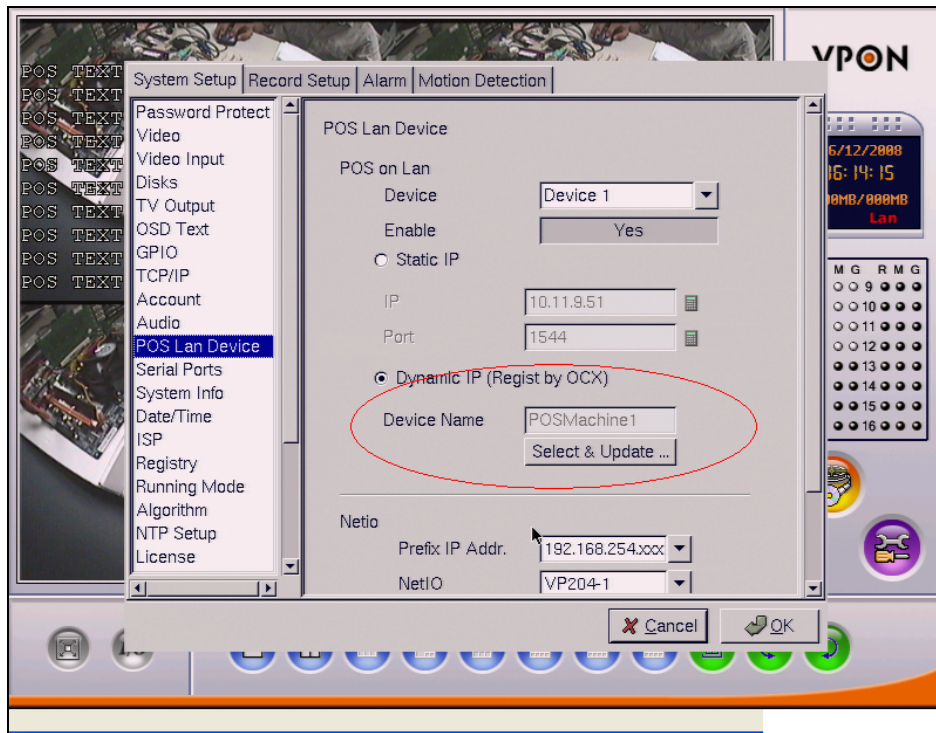
- ✧ **Manual Text:** Manually configured by the user. Have to Enable "Enable User Configurable Text" to activate it. It will send a line **every period of Interval time**.

- ✧ **Interval:** Change the period in which the POS data are sent.
- ✧ **Logs:** This will show the logs.
- ✧ **Clear Logs:** It will clear the logs.
- ✧ **Enable Saving Logs:** By default, enabled. It is to specify whether you want to save into a .txt file the logs of the simulator.
- ✧ **Enable User Configurable Text:** Enable to deactivate the "Auto Text" mode and activate the "Manual Text" Mode.

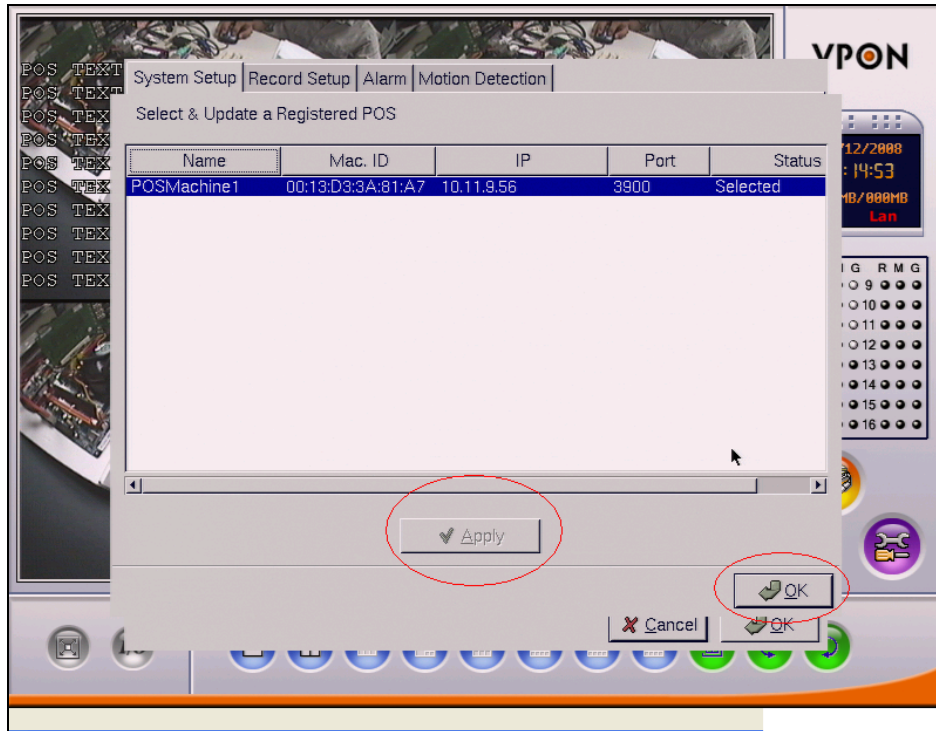
Enter the desired text. Take into consideration the maximum number of characters that the DVR can allow per line. ALWAYS PRESS "ENTER" TO CHANGE THE LINE.

Configuration in the DVR for Dynamic POS LAN:

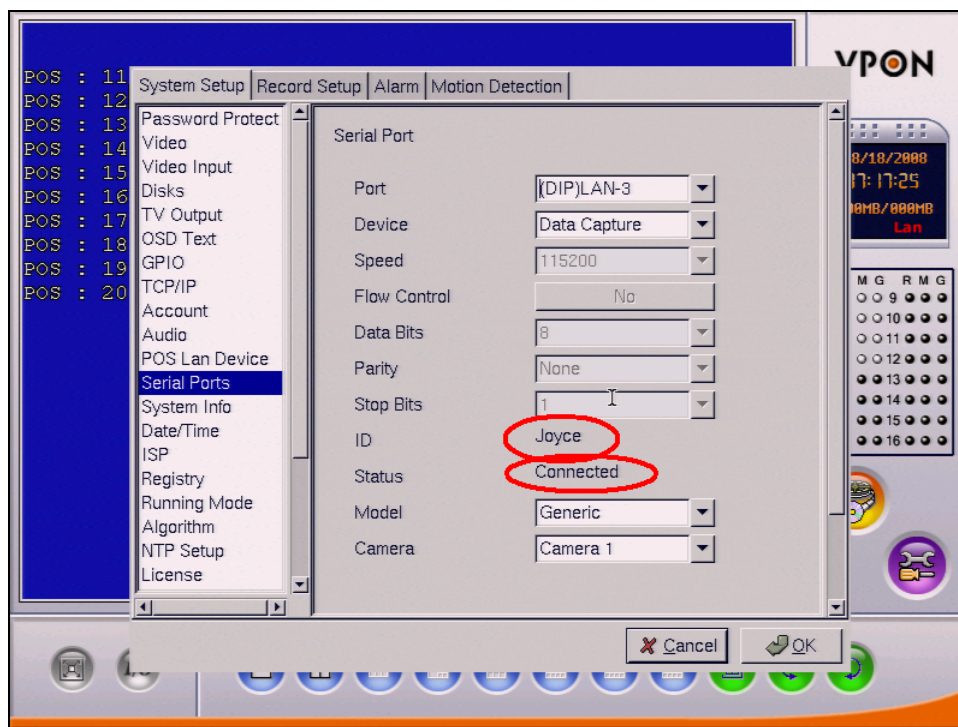
1. Go to "System Setup" -> "POS Lan Device". Enable the Device and select "Dynamic IP".



2. Click on "Select & Update" and you will able to see the following figure:

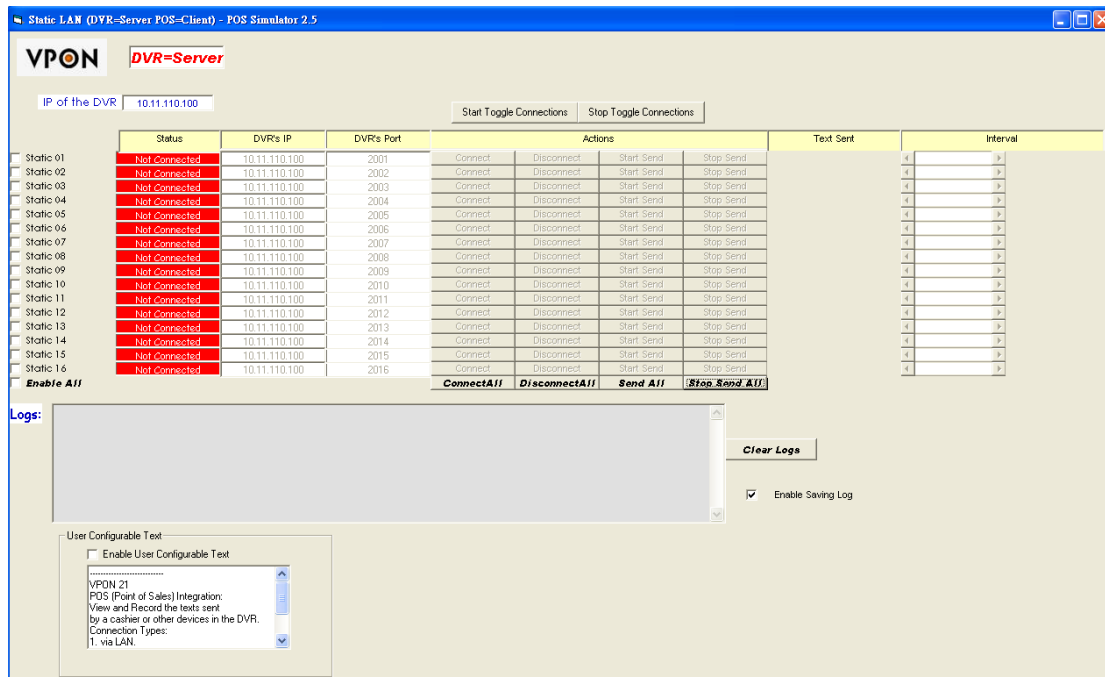


3. Select the one you entered. Click "Apply" and then "OK".
 4. The DVR will reboot to update the settings.
 5. Go to "System Setup" -> "Serial Ports". Select the appropriate LAN (it should be DIP).
- Make sure that the ID is correct (it should be the name of the POS machine).



❖ Static POS Simulator (DVR = **Server**)

It only works with FW version 1.4.3 FR021_pal_epos_static_ip



- ❖ **IP of the DVR:** Enter the IP Address of the DVR. It will copy the IP automatically to all the channels.
- ❖ **Static 01 ~ Static 16:** Enable the selected POS
- ❖ **Enable All:** Enable all the POS channels.
- ❖ **Status:** There are 4 :
 - I. **"Not Connected":** When there are no connections established. It is allowed only in this state to change the port number of the enabled POS channels.
 - II. **"Connecting":** Trying to connect to the DVR.
 - III. **"Connected":** The connection with the DVR is successfully established.
 - IV. **"Sending":** The connection with the DVR is successfully established and the POS Data is being sent.
- ❖ **DVR's IP:** Enter the IP Address of the DVR here. You are allowed to do this only in the state "Not Connected" and if you had already enabled the POS channel.
- ❖ **DVR's Port:** Enter the DVR's port here. You are allowed to do this only in the state "Not Connected" and if you had already enabled the POS channel. Default values: 2001 ~2016
- ❖ **Connect:** Clicking this button will begin establishing the connection of the current POS channel with the DVR.
- ❖ **Connect All:** Clicking this button will begin establishing the connection of **all** the enabled POS

channels.

- ✧ **Disconnect or Stop Connecting:** Will terminate the connection of the selected POS channel.
- ✧ **Disconnect all:** Will terminate all the connections.
- ✧ **Start send:** Clicking this button will start with the sending. This button will be enabled only if the selected POS channel is in "Connected" Status.
- ✧ **Send All:** Clicking this button will start with all the sending of the connected POS Channels.
- ✧ **Stop Send:** Will stop the POS channel in "Sending" status.
- ✧ **Stop Send All:** Will stop all the POS channels in "Sending" Status.
- ✧ **Text Send:** The data that the POS Simulator sends.

There are two types:

- ✧ *Auto Text:* It has the following format.

POS Nr N: X

N: Number of the POS channel. It ranges from 1 to 16.

X: Number from 1 to 60.

It will increase a number (X) **every period of Interval time.**
- ✧ *Manual Text:* Manually configured by the user. Have to Enable "Enable User Configurable Text" to activate it. It will send a line **every period of Interval time.**
- ✧ **Interval:** Change the period in which the POS data are sent.
- ✧ **Logs:** This will show the logs.
- ✧ **Clear Logs:** It will clear the logs.
- ✧ **Enable Saving Logs:** By default, enabled. It is to specify whether you want to save into a .txt file the logs of the simulator.
- ✧ **Enable User Configurable Text:** Enable to deactivate the "Auto Text" mode and activate the "Manual Text" Mode.

Enter the desired text. Take into consideration the maximum number of characters that the DVR can allow per line. ALWAYS PRESS "ENTER" TO CHANGE THE LINE.

4. Enable the quantity (1 to 16) you want to simulate or select **"Enable All"** to activate all the 16 POS channels.

IP of the DVR

	Status	DVR's IP	DVR's Port	
<input type="checkbox"/> Static 01	Not Connected	10.11.110.100	2001	Connect
<input type="checkbox"/> Static 02	Not Connected	10.11.110.100	2002	Connect
<input type="checkbox"/> Static 03	Not Connected	10.11.110.100	2003	Connect
<input checked="" type="checkbox"/> Static 04	Not Connected	10.11.110.100	2004	Connect
<input type="checkbox"/> Static 05	Not Connected	10.11.110.100	2005	Connect
<input type="checkbox"/> Static 06	Not Connected	10.11.110.100	2006	Connect
<input checked="" type="checkbox"/> Static 07	Not Connected	10.11.110.100	2007	Connect
<input type="checkbox"/> Static 08	Not Connected	10.11.110.100	2008	Connect
<input type="checkbox"/> Static 09	Not Connected	10.11.110.100	2009	Connect
<input checked="" type="checkbox"/> Static 10	Not Connected	10.11.110.100	2010	Connect
<input type="checkbox"/> Static 11	Not Connected	10.11.110.100	2011	Connect
<input checked="" type="checkbox"/> Static 12	Not Connected	10.11.110.100	2012	Connect
<input type="checkbox"/> Static 13	Not Connected	10.11.110.100	2013	Connect
<input type="checkbox"/> Static 14	Not Connected	10.11.110.100	2014	Connect
<input type="checkbox"/> Static 15	Not Connected	10.11.110.100	2015	Connect
<input type="checkbox"/> Static 16	Not Connected	10.11.110.100	2016	Connect
Enable All				ConnectAll

- Change the port number you want or use the default ones (1001 to 1016) and click on "Connect" to begin the communication.
- The "Status" will change to "Listening" and after a successful connection, it will start sending the data.

Static LAN (DVR-Server POS-Client) Simulator 2.2

VPON DVR=Server

IP of the DVR

	Status	DVR's IP	DVR's Port	Actions				Text Sent	Interval
<input checked="" type="checkbox"/> Static 01	Sending	10.11.110.100	2001	Connect	Disconnect	Start Send	Stop Send	POS#1: 1	1000 milliseconds
<input type="checkbox"/> Static 02	Not Connected	10.11.110.100	2002	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 03	Not Connected	10.11.110.100	2003	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 04	Not Connected	10.11.110.100	2004	Connect	Disconnect	Start Send	Stop Send		
<input checked="" type="checkbox"/> Static 05	Sending	10.11.110.100	2005	Connect	Disconnect	Start Send	Stop Send	POS#5: 0	1000 milliseconds
<input type="checkbox"/> Static 06	Not Connected	10.11.110.100	2006	Connect	Disconnect	Start Send	Stop Send		
<input checked="" type="checkbox"/> Static 07	Sending	10.11.110.100	2007	Connect	Disconnect	Start Send	Stop Send		1000 milliseconds
<input type="checkbox"/> Static 08	Not Connected	10.11.110.100	2008	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 09	Not Connected	10.11.110.100	2009	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 10	Not Connected	10.11.110.100	2010	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 11	Not Connected	10.11.110.100	2011	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 12	Not Connected	10.11.110.100	2012	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 13	Not Connected	10.11.110.100	2013	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 14	Not Connected	10.11.110.100	2014	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 15	Not Connected	10.11.110.100	2015	Connect	Disconnect	Start Send	Stop Send		
<input type="checkbox"/> Static 16	Not Connected	10.11.110.100	2016	Connect	Disconnect	Start Send	Stop Send		
Enable All				ConnectAll	DisconnectAll	Send All	Stop Send All		

Logs:

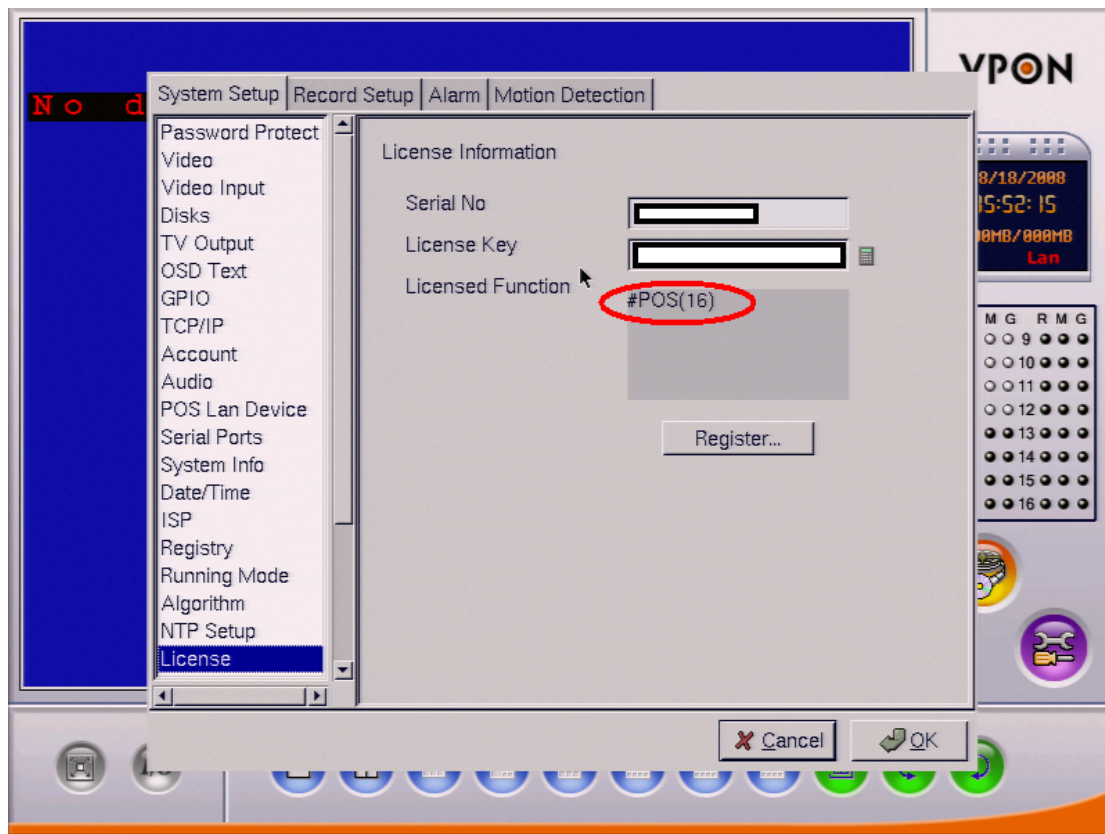
```

9/24/2008 11:35:41 AM POS #1: Connecting using PC port #4739 to DVR port #2001.
9/24/2008 11:35:41 AM POS #5: Connecting using PC port #4740 to DVR port #2005.
9/24/2008 11:35:41 AM POS #7: Connecting using PC port #4741 to DVR port #2007.
9/24/2008 11:35:43 AM POS #1: Connected
9/24/2008 11:35:43 AM POS #1: Start Transmitting
9/24/2008 11:35:44 AM POS #5: Connected
9/24/2008 11:35:44 AM POS #5: Start Transmitting
9/24/2008 11:35:46 AM POS #7: Connected
9/24/2008 11:35:46 AM POS #7: Start Transmitting
  
```

Clear Logs

Configuration in the DVR for Static POS LAN:

- Please check first that you have the required POS License:

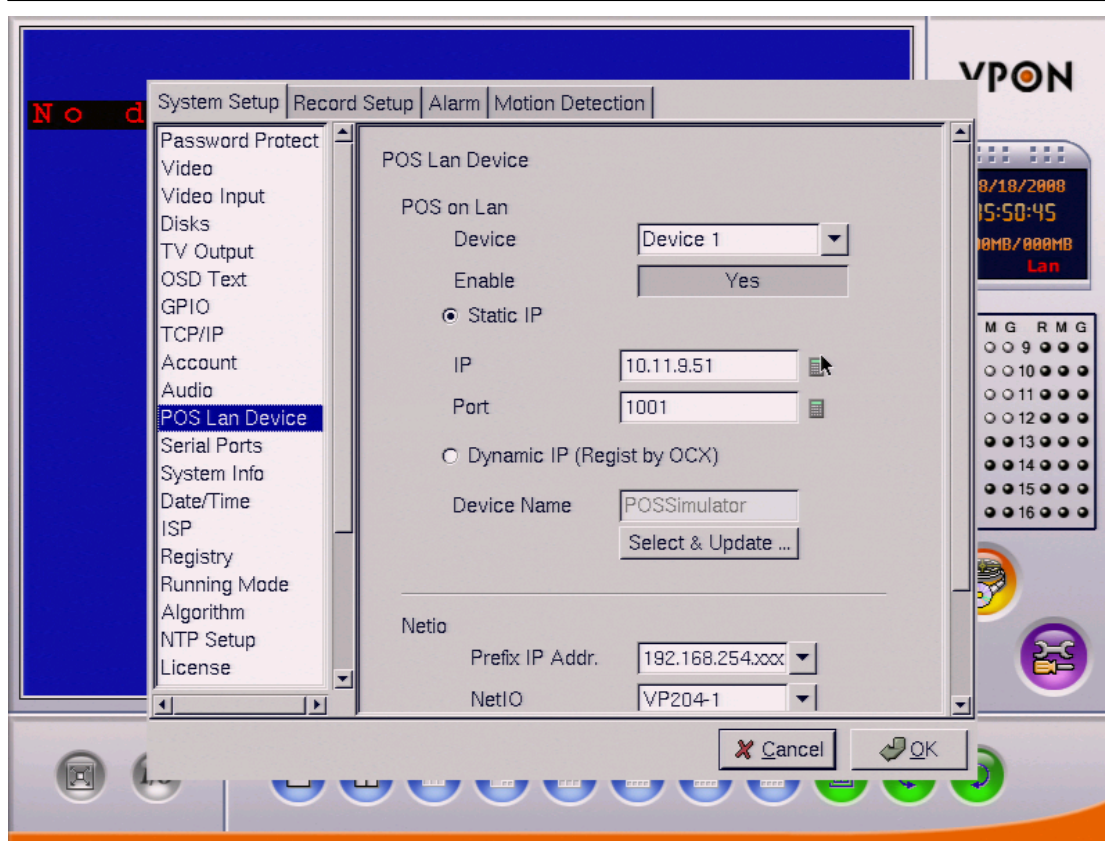


5. Go to "System Setup" -> "POS Lan Device", enable the Device.

IP: It is the IP of the PC using POS Simulator.

Port: Port of the DVR that will be opened.

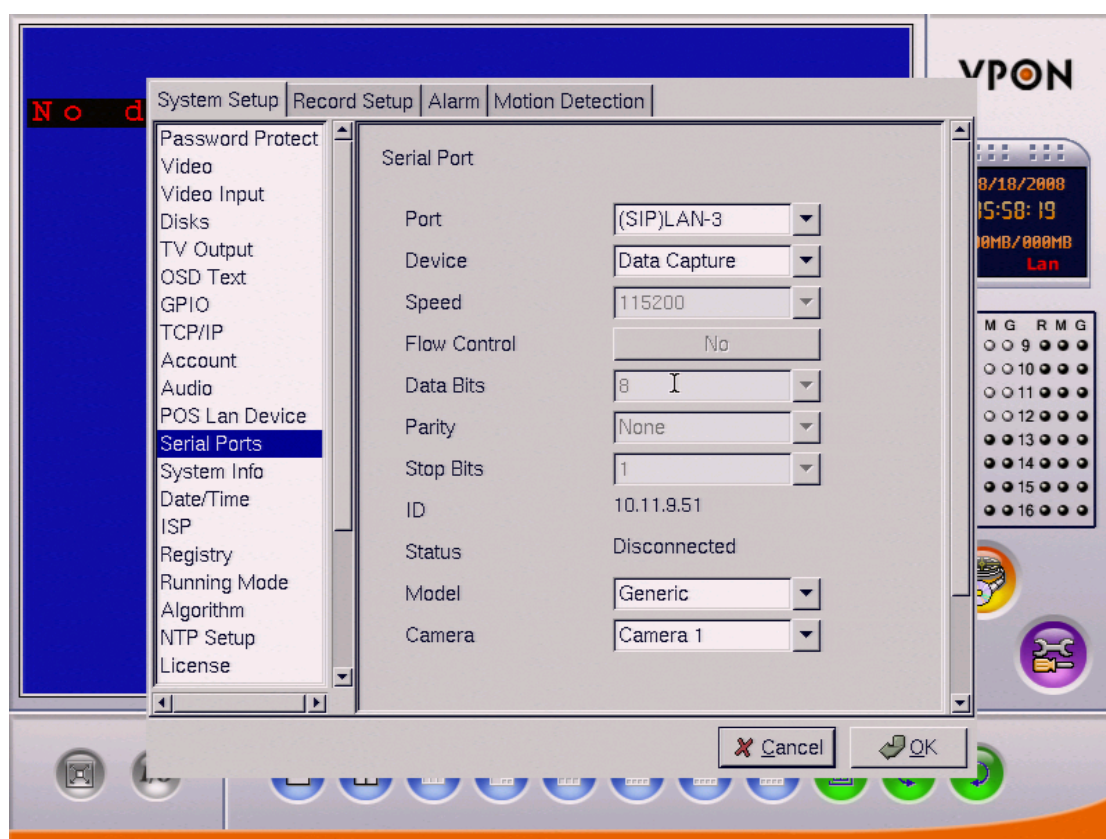
Click "OK" after defining the IP and Port. The DVR will reboot after this operation.



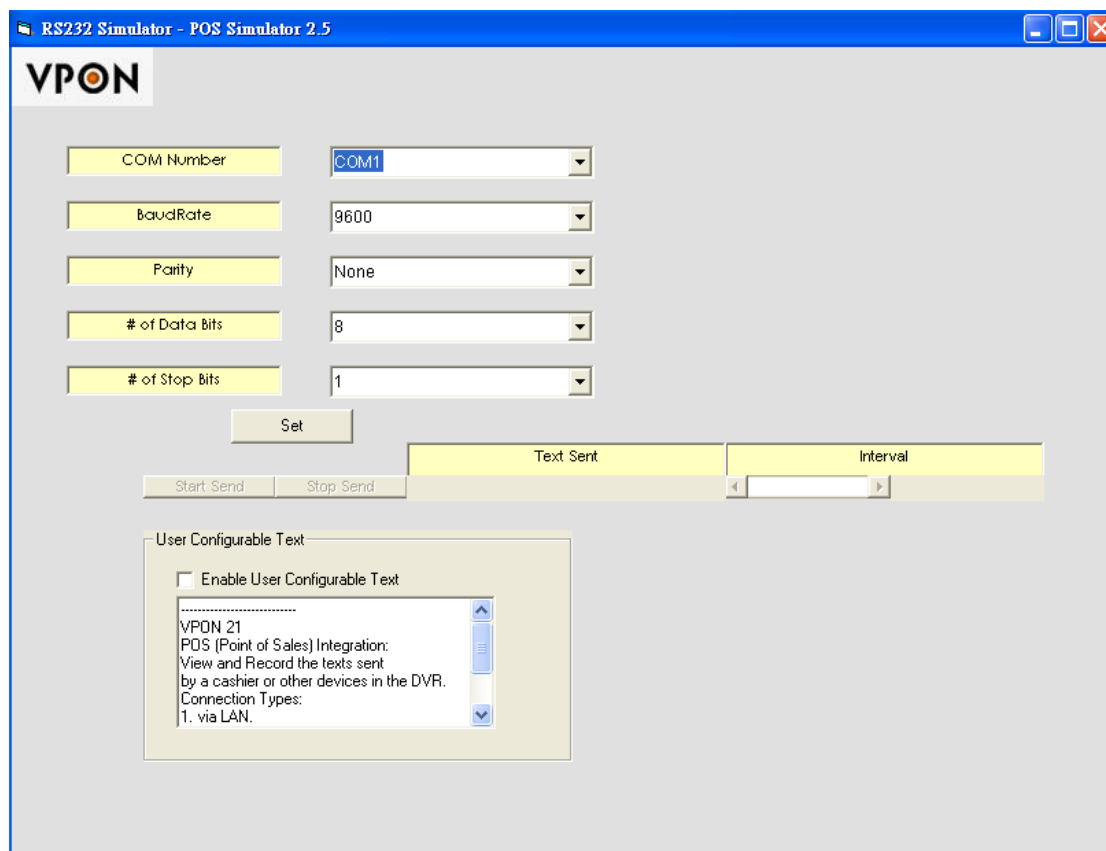
- Go to "System Setup"->"Serial Ports". Select the appropriate LAN Device. (SIP= Static POS, DIP=Dynamic POS). The DVR will reboot after this operation during the first time.

IMPORTANT:

Remember to change the device to "DATA capture", or the connection will never be established.



✧ RS-232 Simulator



- ✧ **COM Number:** Enter the COM port that you will use.
- ✧ **BaudRate:** Enter the desired baudrate of connection.
- ✧ **Parity:** Enter the parity of connection.
- ✧ **# of Data Bits:** Enter the # of data bits of connection.
- ✧ **# of Stop Bits:** Enter the # of Stop bits of connection.
- ✧ **Set:** Press it to set the configuration of the COM port.
- ✧ **Start send:** Clicking this button will start with the sending. This button will be enabled only if the user clicked on "Set" before.
- ✧ **Stop Send:** Will stop the transmission.
- ✧ **Text Send:** The data that the POS Simulator sends.

There are two types:

- ✧ *Auto Text.* It has the following format.

POS Nr N: X

N: Number of the POS channel. It ranges from 1 to 16.

X: Number from 1 to 60.

It will increase a number (X) **every period of Interval time.**

- ✧ *Manual Text:* Manually configured by the user. Have to Enable "Enable User Configurable Text" to activate it. It will send a line **every period of Interval time.**

- ✧ **Interval:** Change the period in which the POS data are sent.
- ✧ **Enable User Configurable Text:** Enable to deactivate the "Auto Text" mode and activate the "Manual Text" Mode.

Enter the desired text. Take into consideration the maximum number of characters that the DVR can allow per line. ALWAYS PRESS "ENTER" TO CHANGE THE LINE.

LOG in .txt Files

The POS Simulator will dump the logs in a txt file when:

- ✧ 500 entries are reached.
- ✧ When the program closes.

The filenames will be saved inside the folder "LOGS" that will be inside the current folder.

The filenames have the following format:

1. For Static POS Simulator (DVR=Client):
"LOG_STATIC_DVR_Client_YearMonthDay_HourMinuteSeconds.txt"
 2. For Static POS Simulator (DVR=Server):
"LOG_STATIC_DVR_Server_YearMonthDay_HourMinuteSeconds.txt"
- For Dynamic POS Simulator (DVR=Server):
"LOG_DYNAMIC_YearMonthDay_HourMinuteSeconds.txt"