

[softogo]

# WireLess Studio

## Help

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# WireLess Studio Description

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## Purpose

WireLess Studio is a set of software components that allows to run Windows PC applications in a server using data acquisition terminals connected over a network.

Applications run in the host server PC. Data may be in the same computer or in other one. Clients act as "smart terminals" that provide the user interface of the application.

WireLess Studio is the easiest way to take advantage of Windows applications and remote data acquisition devices over a wireless RF network.

WireLess Studio offers administrative tools to manage the distributed applications, client connections and action log.

## Manuals

WireLess Studio has three manuals:

- The [User's Guide](#), to help users of the WireLess Studio Clients (Windows and DOS).
- The [Administrator's Guide](#), to help in the installation steps, configuration, administration and running.
- The Developer's Guide, (WSDG WireLess Studio Developer Guide) to help in the WireLess application development process.

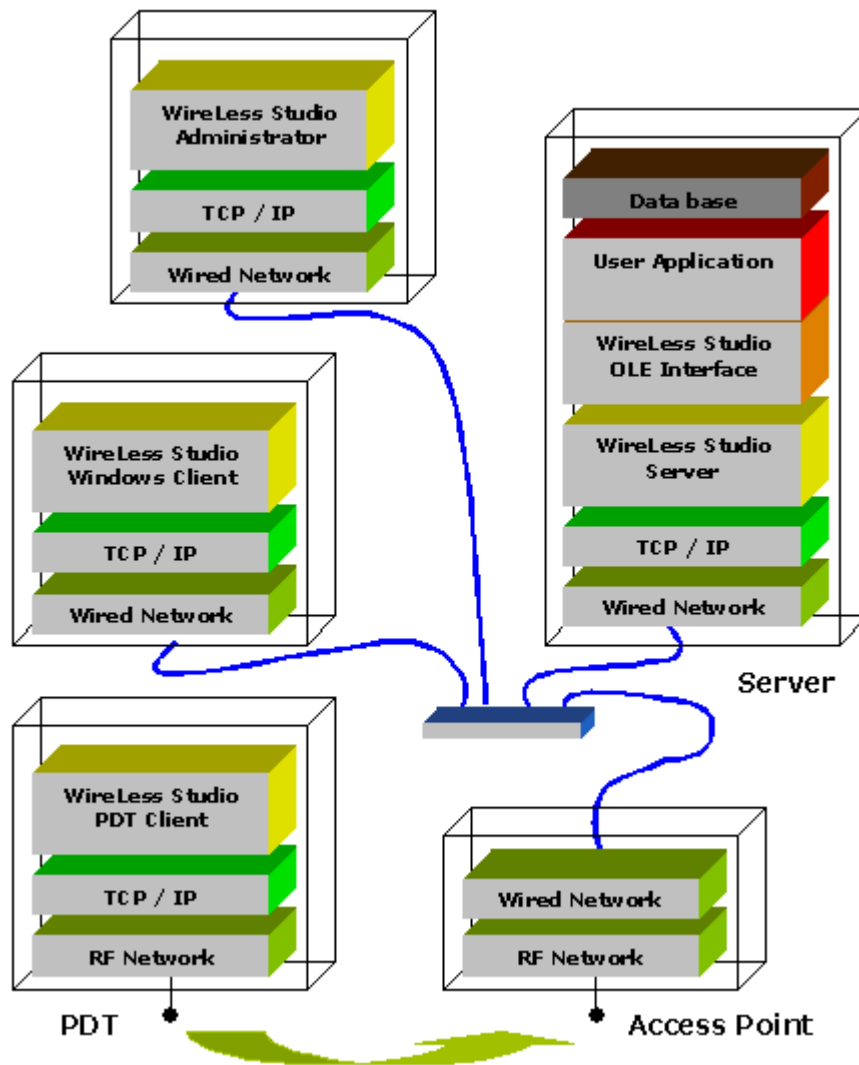
## Components

The components of WireLess Studio are:

<ul style="list-style-type: none"><li>• The <a href="#">Desktop Server</a> W95/W98/WXP/WNT/W2000</li></ul>	The server accepts connections from clients, launches and runs the PC's applications. This server (WSServer) needs a user logged in the PC and may be started/stopped from the desktop.
<ul style="list-style-type: none"><li>• The <a href="#">Service Server</a> WNT/W2000</li></ul>	The server accepts connections from clients, launches and runs the PC's applications. This server (WSServerSvc) is a NT Service, doesn't need a user logged in the PC, and may be started automatically and managed from the "Services" control panel.

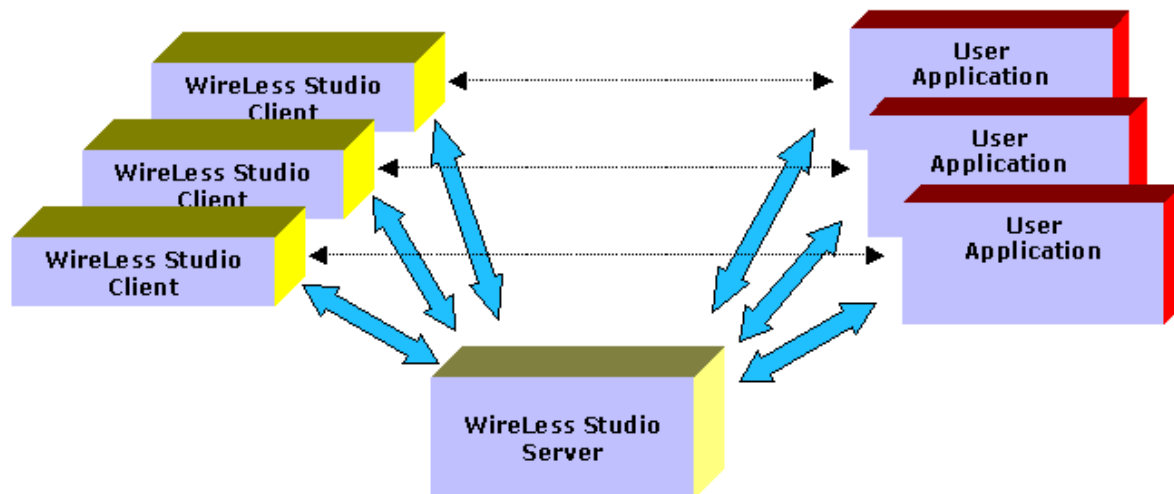
<ul style="list-style-type: none"> <li>• The <a href="#">Administrator</a></li> </ul>	<p>The Administrator (WSAdm) allows to manage the profiles and applications, view the current connections and shutdown sessions or the server. The administrator allows to input the license code.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">Windows Client</a></li> </ul>	<p>The Windows Client (WSWClient) is a Windows program that emulates a hand-held terminal, and allows to run WireLess Studio applications from a PC.</p>
<ul style="list-style-type: none"> <li>• The Development Libraries</li> </ul>	<p>The development libraries is a package that contains the Ole interface, some samples and documentation to write Windows programs to drive terminal clients.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">DOS Client</a></li> </ul>	<p>The DOS Client (WS11_XXX.hex OR WS24_XXX.hex AND WSPdtXX.hex) is the program that runs in the terminal. It includes a Windows loader (NvmHex) to download the program into the mobile station.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">WinCE Client</a></li> </ul>	<p>The WinCE Client (Pocket PC) is the program that runs in the terminal. It includes a Windows application flash loader (NvmHex) to download the program into the terminal station.</p>

## General Diagram



## Clients and applications

Every connected client runs a unique application on the server. The actual connection is done through the server, but virtually every client interacts with a unique occurrence of the user application.



## Network Considerations

WireLess Studio uses the TCP/IP network stack to communicate between the different components. Hence, every component of the network needs to be configured to have access to the TCP/IP protocol, and they also need to give access to the other devices on the network.

## Development of applications

WireLess Studio has an OLE library component that should be registered in the computer that runs the server to allow the user application to have access to the server. Through the server the application drives the WireLess Studio Client that performs the user interface to interact with the user.

The OLE interface allows to integrate easily the remote data capture functions in the client to a Windows application.

Some Visual Basic samples with source code are integrated in the package when installing for demonstration purposes.

## Quick running guide

Install WireLess Studio from CD with standard configuration.

If you are running under W95 / W98 or WXP, launch the server from the desktop icon. If you are running under W2000 or WNT the service server is automatically launched.

Launch the WireLess Studio Windows Client from the desktop icon. Click on "localhost" connection.

At sign-on, input the DEMO profile and DEMO password. You are running demo programs, select one of them.

At sign-on, input the APP profile and APP password. You are running the Barcode demo program.

You have a single-user evaluation license, so you may not run more than one client at a time.



# Demo Programs

---

## DEMO (Object Demonstration)

These programs show the use of various objects of the WireLess Studio package.

User profile : DEMO  
Profile Password : DEMO

Menu text : "RF Tone"  
Executable file : DemoTone.exe  
Shows the beep generation, storing, playing, and loading of the file only if needed.  
Play the tone one time, then hit F1 to play again. The second time the file is not loaded.

Menu text : "RF Terminal"  
Executable file : DemoTerminal.exe  
Shows the parameters of the terminal station.

Menu text : "RF Ping"  
Executable file : DemoPing.exe  
Shows the "ping" function, allowing to test the average delay of the network connection.  
Shows the minimum, maximum and average round-trip delay.

Menu text : "RF Barcode"  
Executable file : DemoBarcode.exe  
Shows a sample of a barcode input sequence.  
Builds and stores a barcode configuration.  
Inputs a barcode, and shows the data and barcode type read.

Menu text : "RF Menu"  
Executable file : DemoMenu.exe  
A complete selection menu.  
Builds a menu, loads if necessary, uses the stored menu.  
Shows the user choice.

Menu text : "RFIO Display"  
Executable file : DemoIODisplay.exe  
Client's display capabilities.  
A simple display screen.  
A sequence of screens (2) stored in memory, and displayed later (1, 2, 1).

Menu text : "RFIO Input"

Executable file : DemoIOInput.exe

Shows various input modes :

- \* A one-key input mode, that shows the "LastInput" variables, and the first character returned.

- \* A user input with default data, alphabetical only allowed, ENTER needed to complete input, scanner available. Shows the data entered.

- \* A user input with no default data, numeric only allowed, no ENTER needed to complete input (autoValid), no scanner available. Shows the data entered.

- \* A user input with no default data, alphanumeric allowed, no ENTER needed to complete input, no scanner available. Special input cursor (dash instead of underscore), "secret mode" (asterisks echoed). Shows the data entered.

Menu text : "RF File"

Executable file : DemoFile.exe

Shows the file and local data manipulation.

Lists all the files in the RAM drive (shows names) in one or more summarized screens.

Shows details file by file.

Stores and retrieves data in a local file.

Menu text : "RF AuxPort"

Executable file : DemoAuxport.exe

Shows the serial port data capture function.

Connect the terminal by the serial port COM1 to a PC, with HyperTerminal launched.

Set 9600 Bauds speed, 8 data bits, no parity, 1 or 2 stop bits, no flow control.

When the demo program starts, you will see the "Hit Enter" prompt.

Key some data, followed by ENTER key (0Dh or 13 character).

The terminal shows the keyed data.

Menu text : "RF Error"

Executable file : DemoError.exe

Show the error message usage.

Two "timed out" messages swapping 3 times (ONE and TWO). Wait the end of the loop.

Two "user input" messages swapping 3 times (ONE and TWO). Hit the clear key to get to the next screen.

Error objects play the "ERROR" tone stored by WSPM.

Menu text : "RFIO Port"

Executable file : DemoIOPort.exe

Shows an input sequence that allows a serial port input.

Connect the terminal by the serial port COM1 to a PC, with HyperTerminal launched.

Set 9600 Bauds speed, 8 data bits, no parity, 1 or 2 stop bits, no flow control.

Hit some keys in the terminal keyboard or PC keyboard, the keyed data are entered in the same way.

Menu text : "TxRx File"

Executable file : FileTxRx.exe

Shows the file transfer functions.

Creates an initial text file (C:\TEMP\WSTST.TXT), then sends it to the RF Client.

The same file is received from client in (C:\TEMP\WSTST1.TXT).

You may examine the files to check if the data are the same.

Menu text : "File App"

Executable file : FileApp.exe

Shows the loaded "local application" executable files.

Lists application files in the FLASH drive (shows names) in one or more summarized screens.

Shows details file by file.

## APP (Simple input application)

This program shows an elementary application, that displays a window in the PC screen, and allows a barcode input in the terminal.

This application should not work with the service server (NT, 2000). In this case, stop the service server, launch the desktop server, and run the application.

The application that runs is the same in the 4 menu choices.

In the first choice, the language used is the selected user interface language chosen by the operator at boot time (configuration menu).

In the other three choices, the language is selected by this menu.

User profile : APP

Profile Password : APP

Menu text : "Barcode"

Executable file : AppBC.exe

No arguments in command line.

Menu text : "Barcode US"

Executable file : AppBC.exe

Command line arguments : "US"

Menu text : "Barcode FR"

Executable file : AppBC.exe  
Command line arguments : "FR"

Menu text : "Barcode SP"  
Executable file : AppBC.exe  
Command line arguments : "SP"

Select the program, then scan barcodes or input (numeric) data from keyboard.

At each data keyed, the window in the server PC host is updated.

## USR (User local applications)

This program is a demo program and a configurable download utility.

It allows to download and launch a local application program in the TERMINAL, by the "update" method (loaded only if necessary).

Just copy the application executable files (one or more) in a dedicated folder. The folder should be :

- \* Under the current folder (the directory with the UsrApp.exe executable file), a sub-directory called "UsrApp".

- \* Any folder. Indicate it in the command line by "-dX:\MyApps\MyFolder" (-d is the "directory" token).

When the user selects this application, the program downloads the user files if needed, then exits and saves it in the FLASH disk.

If you want to run the local application immediately, set the "-r" token. Otherwise, the program only saves the local application program files.

If you want to run the local application later by a user choice in the main menu, set the "-m" token to allow a menu text display and a call by F9 key ("-mMenuText").

If you want to "clean" the memory (delete all other previously loaded applications), set the "-c" token.

User profile : USR  
Profile Password : USR

Menu Text : "USER" (Not shown, there's only one application in this profile by default).

Executable file : UsrApp.exe  
Command line arguments : "-c -r -mLOCALOP"

Select the profile, the program starts showing the current options. The connection will be closed if saving and/or running applications is required.

# User's Guide

---

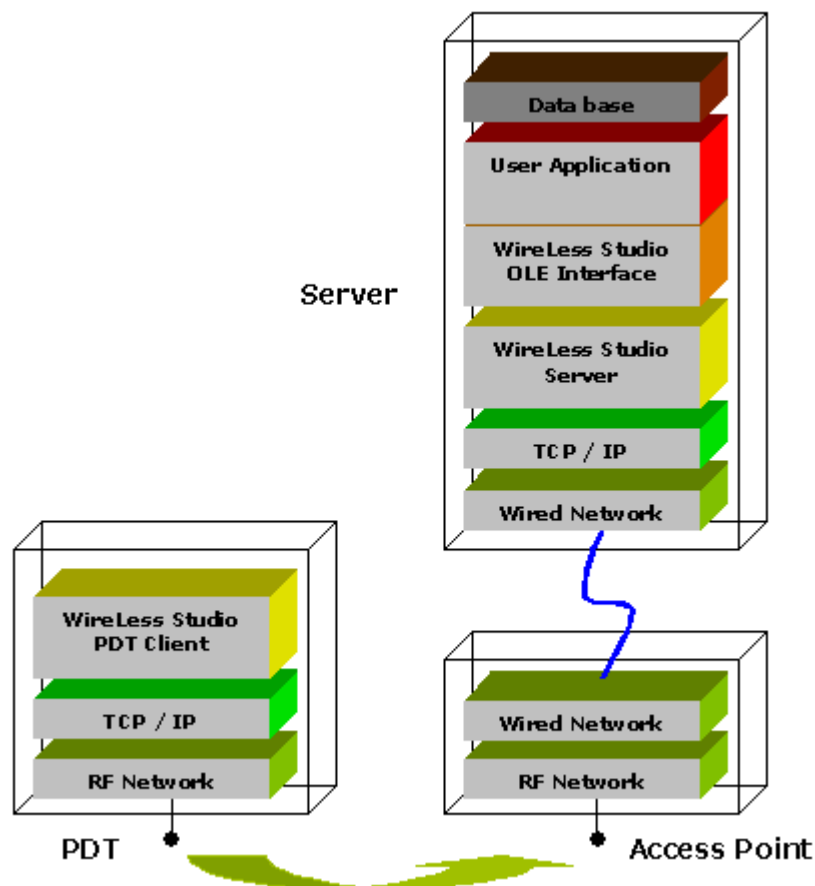
## . DOS Client

### Description

WireLess Studio DOS Client (WSDOS) is the program in the hand-held terminal, and allows to run WireLess Studio applications.

The TCP/IP protocol must be properly configured in the terminal. See the [Administrator's Guide / Network Configuration / DOS Client](#).

To install WSTerminal from the server PC, see the [Administrator's Guide / Installing DOS Client](#).



### Starting / Configuring

This screen appears only after a "Cold Boot" or by "WS Config".  
Select the language of the TERMINAL Client messages.

```
xxx.xxx.xxx.xxx
WireLess Studio V1.1
=====

[F1] = US
[F2] = FR
[F3] = SP
```

Press [FUNC] [1] for English.  
Press [FUNC] [2] for French.  
Press [FUNC] [1] for Spanish.

Select the display font height.

```
xxx.xxx.xxx.xxx
WireLess Studio V1.1
=====
===== Display =====

[F1]=Normal Height
[F2]=Double Height
```

Press [FUNC] [1] to display a normal height font.  
Press [FUNC] [2] to display a double height font (makes a 4 line display in a 8 line terminal).

Select the IP Address of the server, or the Wizard Id ("?" by default, which means "all the servers").

```
=====
= Configuration =
=====
Host IP Address
?.....
Port : 2001

[F1] = Cancel
```

Input the WSServer Host IP Address, or the Wizard Id then [ENTER].  
(See [Administrator's Guide](#) / [Network Configuration](#) / [Server Connection Wizard](#)).

Confirm or modify the Port (Default is 2001).

Press [FUNC] [1] to cancel the modifications and return to the [connect](#) menu.

## Connecting

The IP address shown in the top of the display is the terminal's IP address.

```
xxx.xxx.xxx.xxx
WireLess Studio V1.1
=====
[F1] = CONNECT
[F2] = WS Config.
[F3] = S24 Config.
```

Press [FUNC] [1] to connect.

Press [FUNC] [2] to [Configure](#) the WireLess Studio Server IP Address. The access password is "234".

Press [FUNC] [3] to modify the Terminal Network Parameters. The access password is "307". (See the [Administrator's Guide](#) / [Network Configuration](#) / [DOS](#)).

Press [FUNC] [5] to test barcode scanning.

Press [FUNC] [9] to run the local (batch) application (if any).

The [FUNC] [2] and [3] options are displayed to the user only before the first successful connection and it is hidden afterwards.

```
xxx.xxx.xxx.xxx
WireLess Studio V1.1
=====
Connecting To
10.10.10.1
Port : 2001
```

If a Wizard Id is provided (instead of an IP address), the connection is made with the address that matches the Id.

If more than one server is found, a menu is displayed to allow the user to select the server.

While connecting to the host, wait a few seconds. If it is not the correct IP address, Wizard Id, or Port, press [\[F2\]](#) from the Connect Menu to change the configuration.

## Sign On

You need to Sign-On in WireLess Studio server to select an application to run. The sign-On is done by the Program Manager (WSPm).

```
=====
WireLess Studio PM
=====
User Profile
: .....
Profile Password
: .....
[CLR]=Exit
```

Enter the user profile name and then press [ENTER] (the Keyboard is in numeric mode by default).

Enter the profile password associated with this profile and then press [ENTER] (the Keyboard is in numeric mode by default).

If there is only one application associated with the profile, this application is directly launched.

If there is more than one application, a menu such as the following screen is displayed.

Press [CLR] (or [CLEAR]) to completely disconnect from the WireLess Server.

```
+-----+
:   MYPROFILE   :
: Inventory     :
: Orders        :
+-----+

[CLR] = Exit
```

Move the highlighted cursor (in reverse video) with the Up and Down arrows to select the application, then press [ENTER], or input the option number ([1] for the first, [2] for the second, and so on).

Press [CLR] (or [CLEAR]) to return to the Sign-On screen.

## Operation

If the terminal is out of the S24 radio network range, the terminal holds the connection and asks for retry or to abort the session. The following screen appears :

```
***** ERROR *****
          RADIO
          OUT OF RANGE

[ENTER] To Retry
[CLR] To Abort
```



If the session is aborted, the WireLess connection will remain opened in the server side and you should manually shutdown this session in the host (See the [Administrator's Guide](#) / [WSAdm](#) / [5 Network Topology](#)).

On retry, the terminal station tries to send the current transaction. Move to a radio covered area to reactivate the host session.

## Scanning

The scanner is available only if the host application allows scanner reading. Scanner is activated by the trigger keys in the terminal.

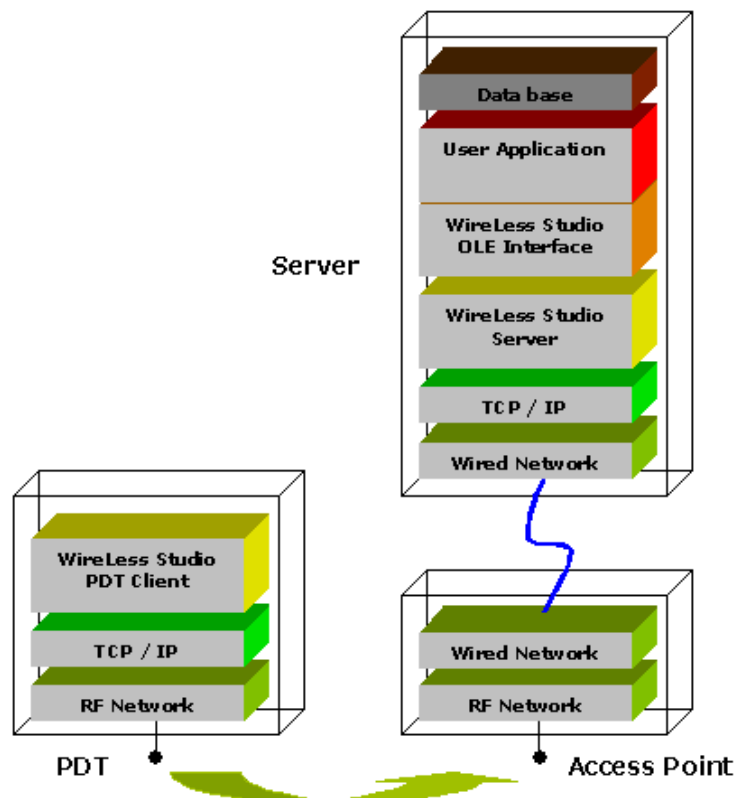
## • WinCE Client

### Description

The WireLess Studio WinCE Pocket PC Client (WSPpc) is the program in the hand-held terminal, and allows to run WireLess Studio applications.

The TCP/IP protocol must be properly configured in the terminal. See the [Administrator's Guide](#) / [Network Configuration](#) / [WinCE Client](#).

To install WSPpc from the server PC, see the [Administrator's Guide](#) / [Installing WinCE Client](#).

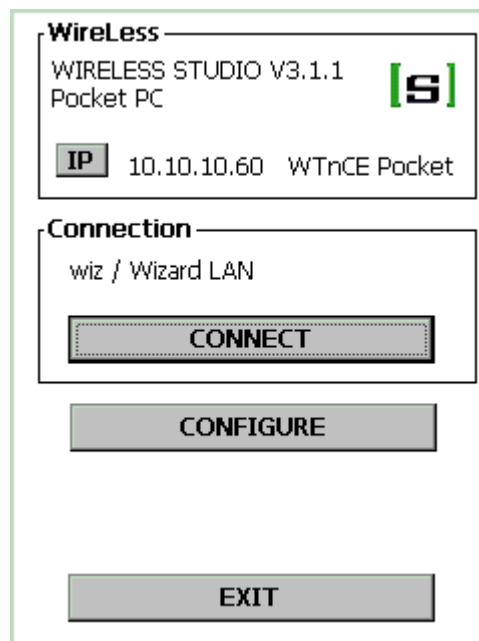


Get (on-line) the terminal Product Reference Guide for the corresponding terminal:

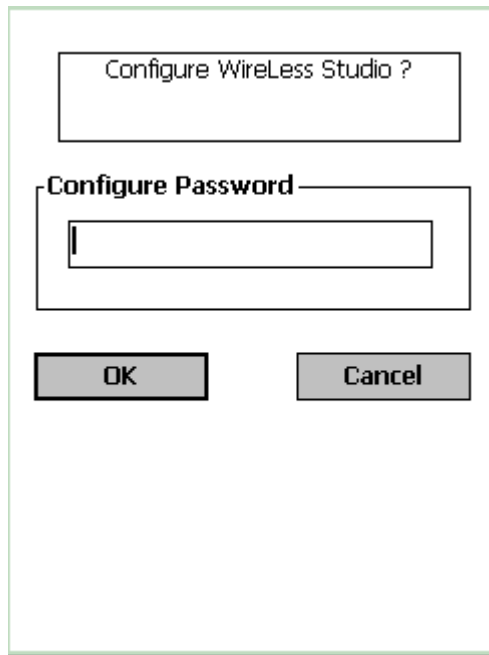
- [PPT2700 Terminal PRG / The on-line manual](#) (Symbol).
- [PPT2800 Terminal PRG / The on-line manual](#) (Symbol).
- [PPT8100 Terminal PRG / The on-line manual](#) (Symbol).
- [PPT8800 Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-G Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-K Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-S Terminal PRG / The on-line manual](#) (Symbol).

## Starting / Configuring

Press the "CONFIGURE" button.

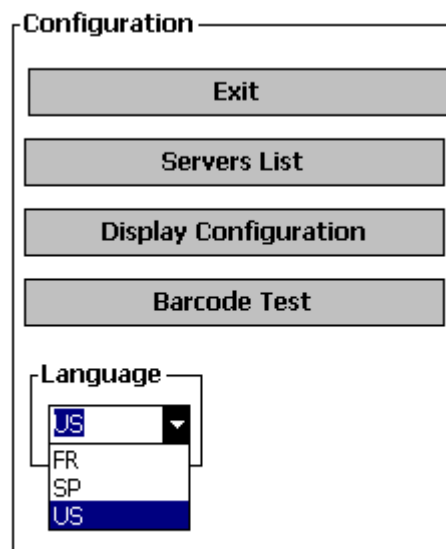


Enter the configuration password ("config" by default).



### Configuration Menu

- Press the "Servers List" button to configure the connection parameters.
- Press the "Display Configuration" button to configure the font and display parameters.
- Select the language in the combo box.



### Servers List

Click on the row to select or hit the "New" button to add a server.  
Hit the "Delete" button to suppress the selected line.  
The names preceded by a "." (dot) are "wizard" names.  
Confirm or modify the Port (Default is 2001).

Press "OK" to validate.

**Servers**

MyWizard

Type LAN WIZARD  
Label MyWizard  
IP/Name ?  
Port 2001  
Conn

New Delete

OK Cancel

Input the new server name.

Select the name type :

- An IP address or Host name (see "Server Names" configuration).
- A WS Wizard Name (identifier, or ?).

(See [Administrator's Guide](#) / [Network Configuration](#) / [Server Connection Wizard](#)).

**New Server**

Default

IP or Host (802.11 LAN)  
 Wizzard Name (802.11 LAN)  
 IP or Host (GPRS RAS WAN)

Label

IP/Name

Port

Conn

OK Cancel

**Note:** To set the server as default check the box.

Press "OK" to validate.

## Display Configuration

Display

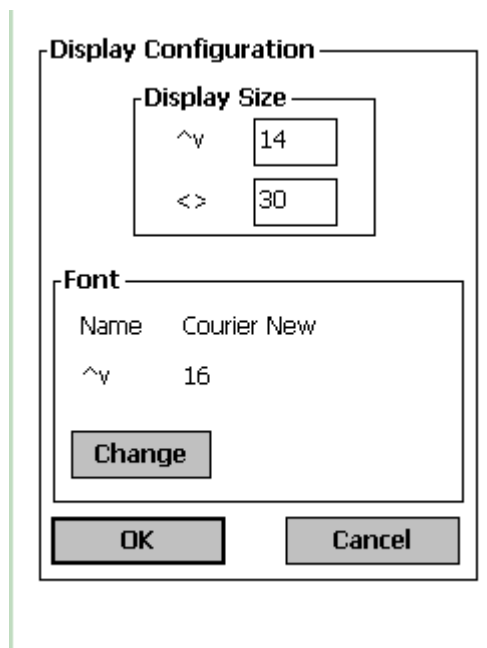
"^v" The height in text rows.

"<>" The width in text columns.

Suggestions :

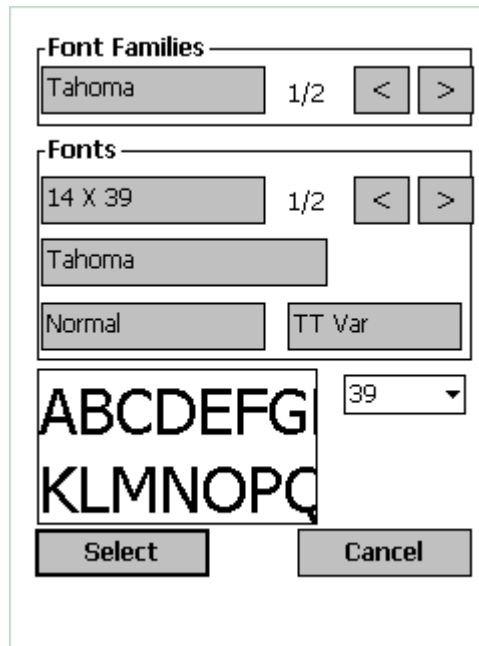
A 14 rows x 30 columns display with a Courier New normal font at 16 points height size.

An 8 rows x 20 columns display with a Courier New normal font at 22 points height size.



Font selection

- Select the Font family (by [<] & [>]).
- For **this** font family, select the available types (by [<] & [>]) (select **Fix** fonts).
- Select the size in the combo box.



## Connecting

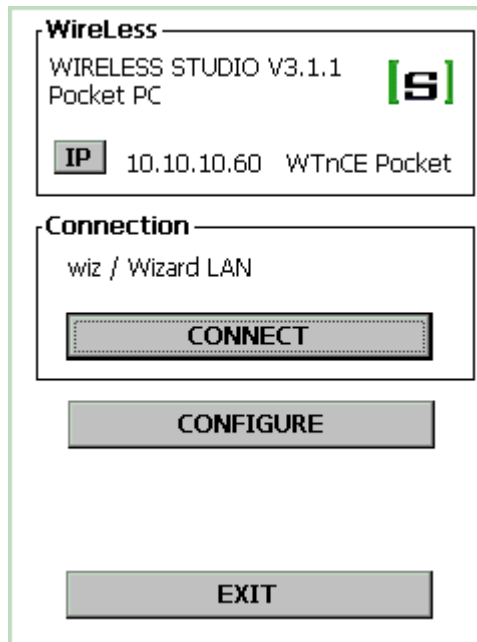
The IP address shown in the top of the display is the terminal IP address.

The IP address or name displayed in the "Connection" box is the current configured server.

- Click on the "CONNECT" button to connect to server.
- Click on the "CONFIGURE" button to modify the WS parameters.
- Click on "EXIT" to close the WS Pocket PC client.

While connecting to the host wait a few seconds. If the IP address, Wizard Id, or Port are not correct, from this menu click on "CONFIGURE" to change the configuration.

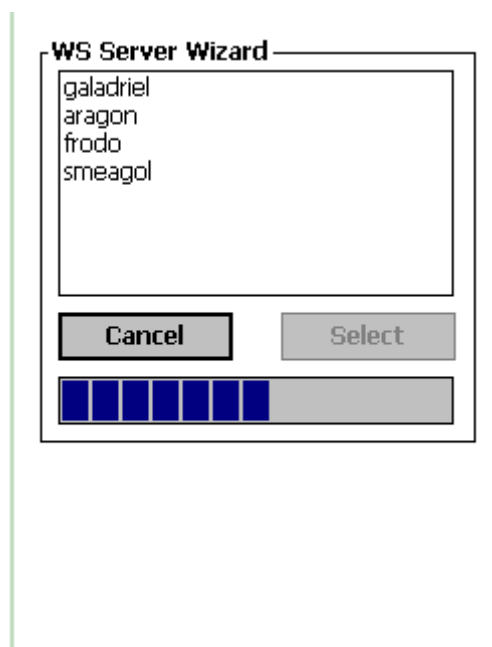
**Note:** To renegotiate your IP address with the DHCP server press the IP button.



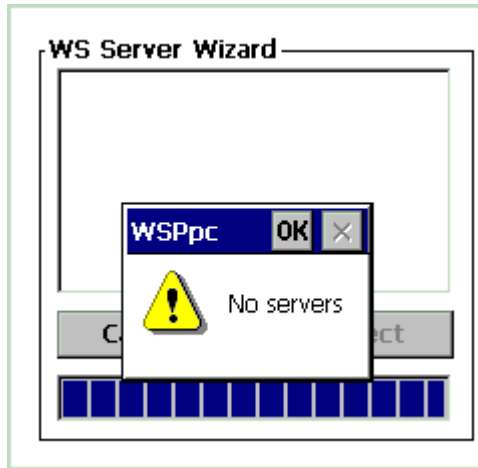
If a Wizard Id is provided (instead of an IP address), the connection is made with the address that matches the Id (all the available servers if "?").

If more than one server is found, this menu is displayed, to allow the user to select the server.

- Click on the server name to select it.
- Click on the "Select" button to connect.

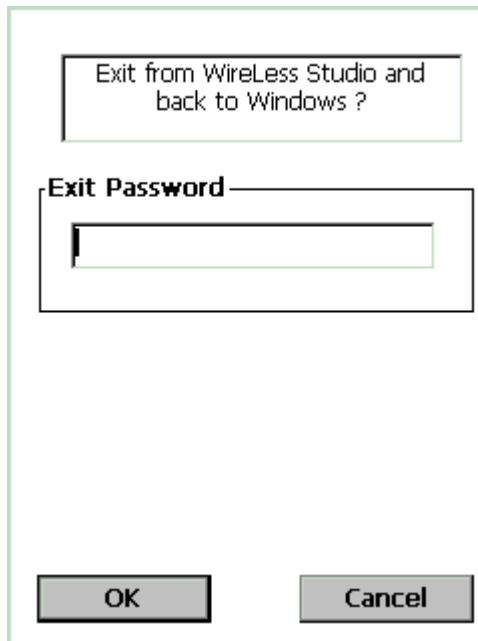


If the selected server is not found, the "No servers" dialog box appears, and WireLess Studio tries to connect to the default server.



## Exit

To exit you must enter a password ("exit", by default)



## Sign On

You need to Sign-On in WireLess Studio Server to select an application to run. The sign-On is done by the Program Manager (WSPm).





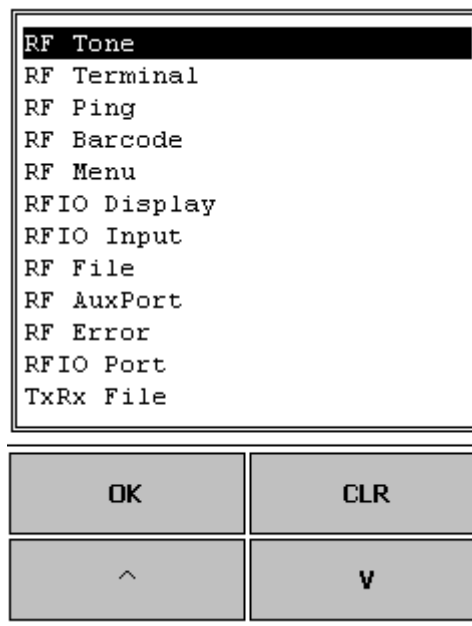
Enter the user profile name and then press [ENTER] (the Keyboard is in numeric mode by default).

Enter the password associated with the profile and then press [ENTER] (the Keyboard is in numeric mode by default).

If there is only one application associated with the profile, the program runs directly this application.

If there is more than one application, a menu like the following screen is displayed.

Press [CLR] (or [CLEAR]) to completely disconnect from the WireLess Server.

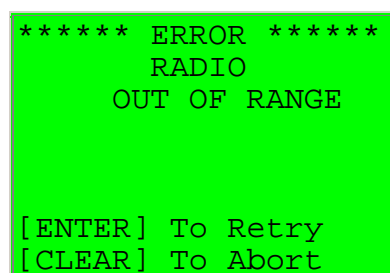


Move the highlighted cursor (in reverse video) with the Up and Down arrows to select the application, then press [ENTER], or input the option number ([1] for the first, [2] for the second, and so on).

Press [CLR] (or [CLEAR]) to return to the Sign-On screen.

## Operation

If the terminal is out of the S24 radio network range, the terminal holds the connection and asks for retry or to abort the session. The following screen appears:



If the session is aborted, the WireLess connection will remain opened in the server side and you should manually shutdown it in the host (See the [Administrator's Guide](#) / [WSAdm](#) / [5 Network Topology](#)).

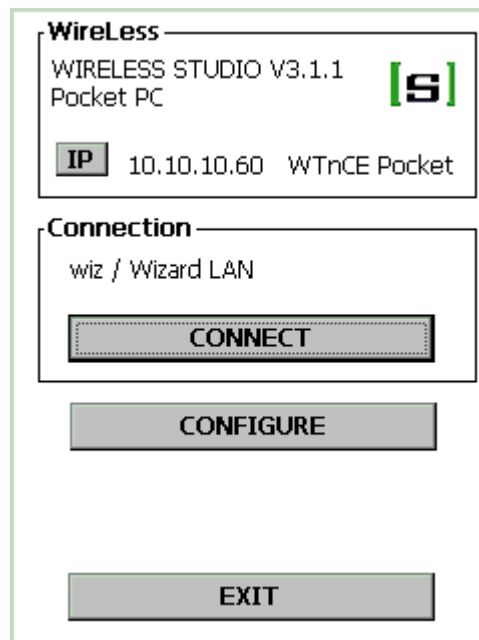
On retry, the terminal tries to send the current transaction. Move to a radio covered area to reactivate the host session.

## Scanning

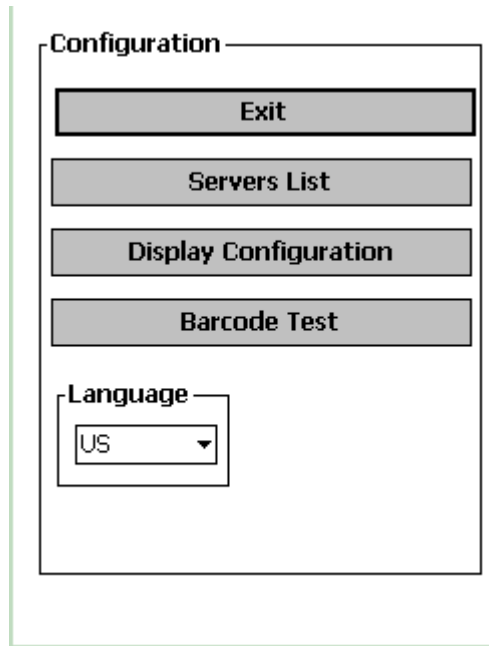
The scanner is available only if the host application allows scanner reading. Scanner is activated by trigger keys in the terminal station.

To test the scanner and barcodes:

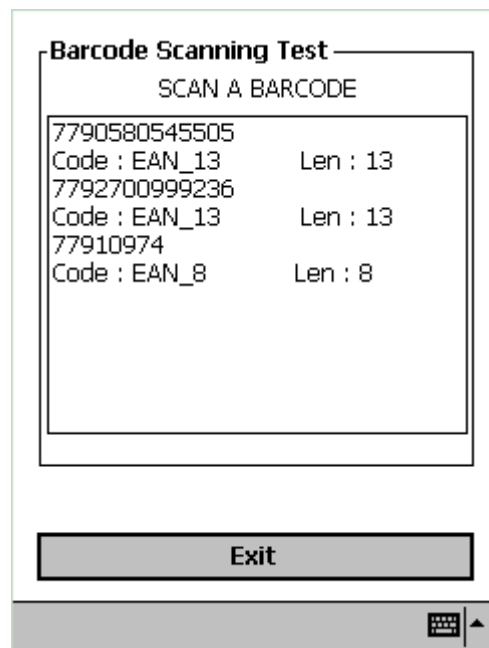
Press the "CONFIGURE" button.



Press the "Barcode Test" button.



Scan a barcode.



Press "Exit" to return to previous menu.

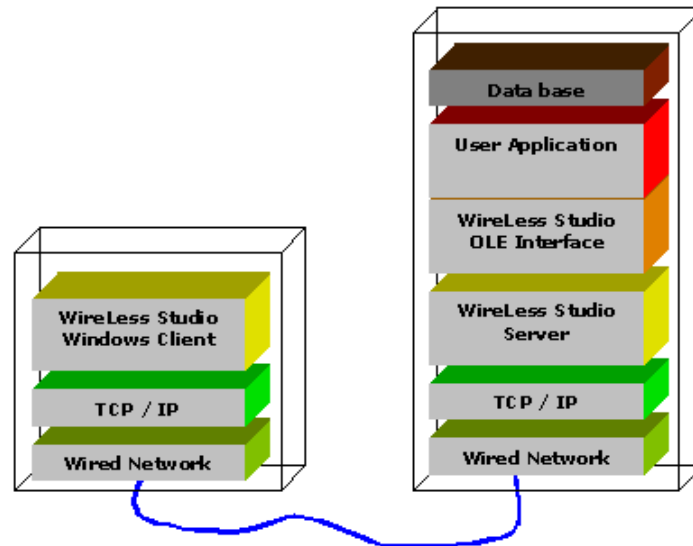
## • Win32 Client

### **Description**

The WireLess Studio Win32 Client (WSW32) is the program in PCs, and allows to run WireLess Studio applications.

The TCP/IP protocol must be properly configured in the PC. See the [Administrator's Guide / Network Configuration / Windows Client](#).

To install WSPpc from the server PC, see the [Administrator's Guide / Installing Windows Client](#).

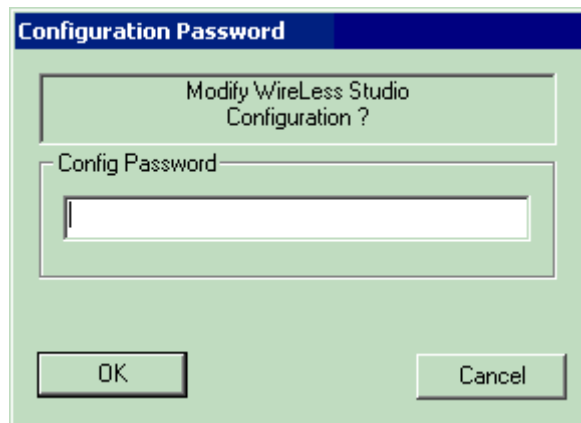


## Starting / Configuring

Press the "CONFIGURE" button.

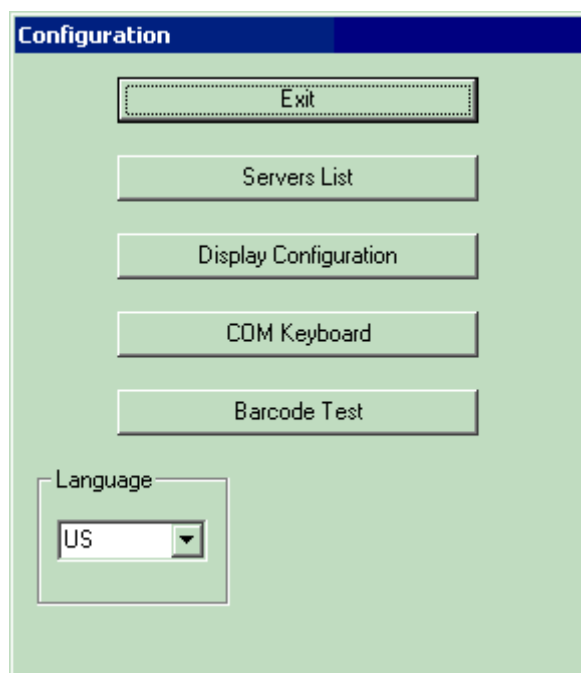


Enter the configuration password ("config" by default).



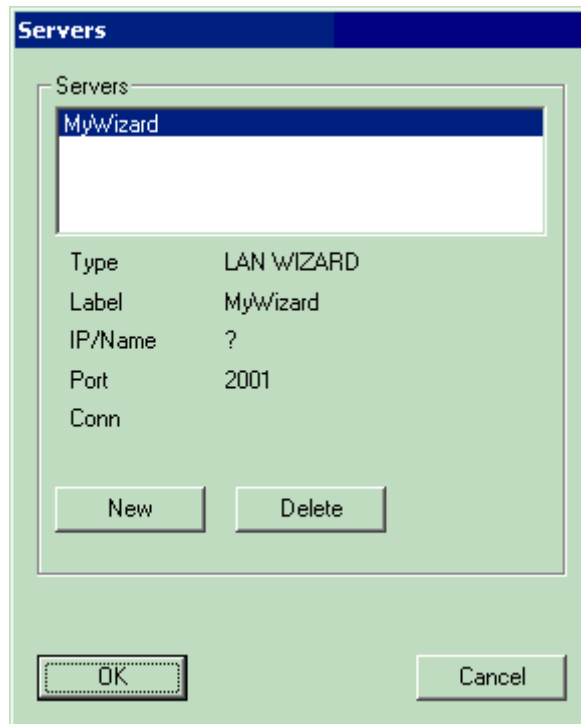
### Configuration Menu

- Press the "Servers List" button to configure the connection parameters.
- Press the "Display Configuration" button to configure the font and display parameters.
- Select the language in the combo box.



### Servers List

Click on the row to select or hit the "New" button to add a server.  
Hit the "Delete" button to suppress the selected line.  
The names preceded by a "." (dot) are "wizard" names.  
Confirm or modify the Port (Default is 2001).  
Press "OK" to validate.

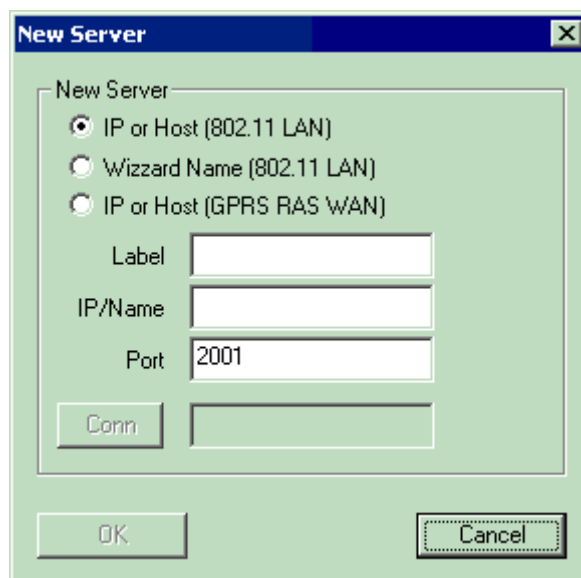


Input the new server name.

Select the name type :

- An IP address or Host name (see "Server Names" configuration).
- A WS Wizard Name (identifier, or ?).

(See [Administrator's Guide](#) / [Network Configuration](#) / [Server Connection Wizard](#)).



Press "OK" to validate.

## Display Configuration

## Display

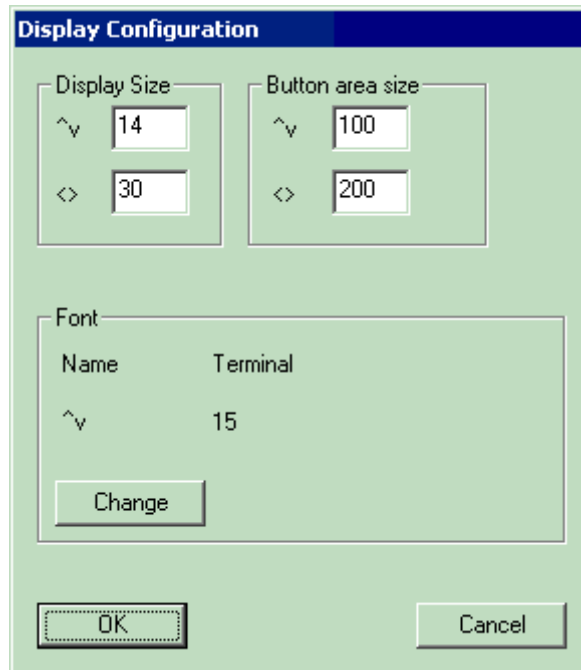
"^v" The height in text rows.

"<>" The width in text columns.

## Suggestions :

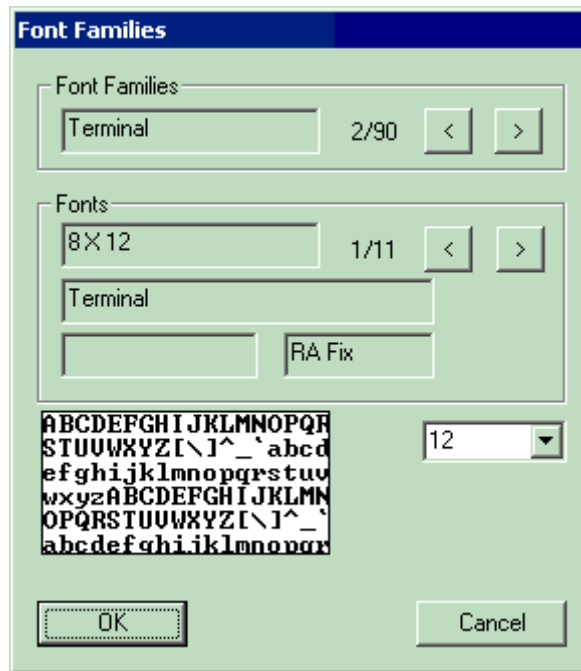
A 14 rows x 30 columns display with a Courier New normal font at 16 points height size.

An 8 rows x 20 columns display with a Courier New normal font at 22 points height size.



## Font selection

- Select the Font family (by [<] & [>]).
- For **this** font family, select the available types (by [<] & [>]) (select **Fix** fonts).
- Select the size in the combo box.



## Connecting

The IP address shown in the top of the display is the terminal IP address.

The IP address or name displayed in the "Connection" box is the current configured server.

- Click on the "CONNECT" button to connect to server.
- Click on the "CONFIGURE" button to modify the WS parameters.
- Click on "EXIT" to close the WS Pocket PC client.

While connecting to the host wait a few seconds. If the IP address, Wizard Id, or Port are not correct, from this menu click on "CONFIGURE" to change the configuration.

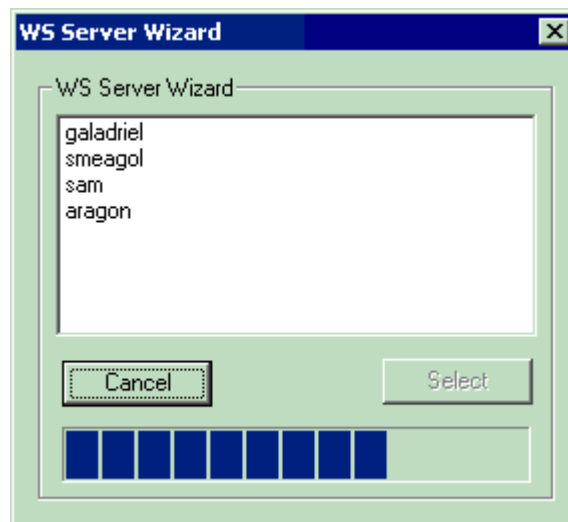




If a Wizard Id is provided (instead of an IP address), the connection is made with the address that matches the Id (all the available servers if "?").

If more than one server is found, this menu is displayed, to allow the user to select the server.

- Click on the server name to select it.
- Click on the "Select" button to connect.

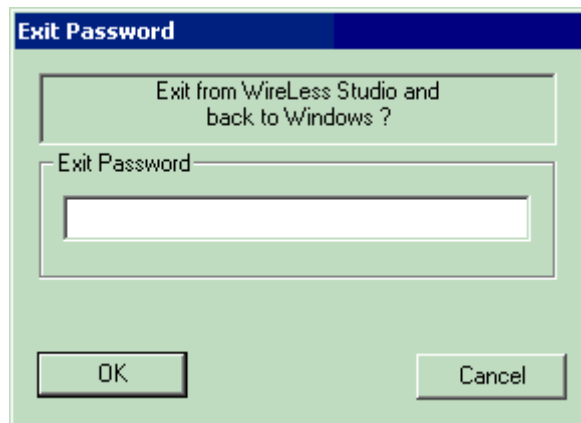


If the selected server is not found, the "No servers" dialog box appears.



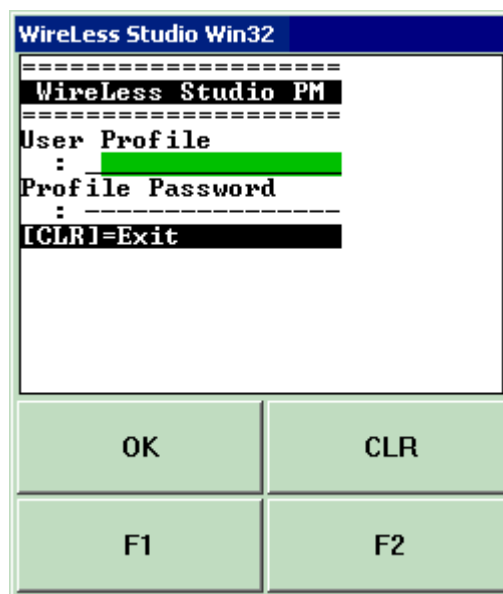
## Exit

To exit you must enter a password ("exit", by default)



## Sign On

You need to Sign-On in WireLess Studio Server to select an application to run. The sign-On is done by the Program Manager (WSPm).



Enter the user profile name and then press [ENTER].  
Enter the password associated with the profile and then press [ENTER].

If there is only one application associated with the profile, the program runs directly this application.

If there is more than one application, a menu like the following screen is displayed.

Press [CLR] (or [CLEAR]) to completely disconnect from the WireLess Server.



Move the highlighted cursor (in reverse video) with the Up and Down arrows to select the application, then press [ENTER], or input the option number ([1] for the first, [2] for the second, and so on).

Press [CLR] to return to the Sign-On screen.

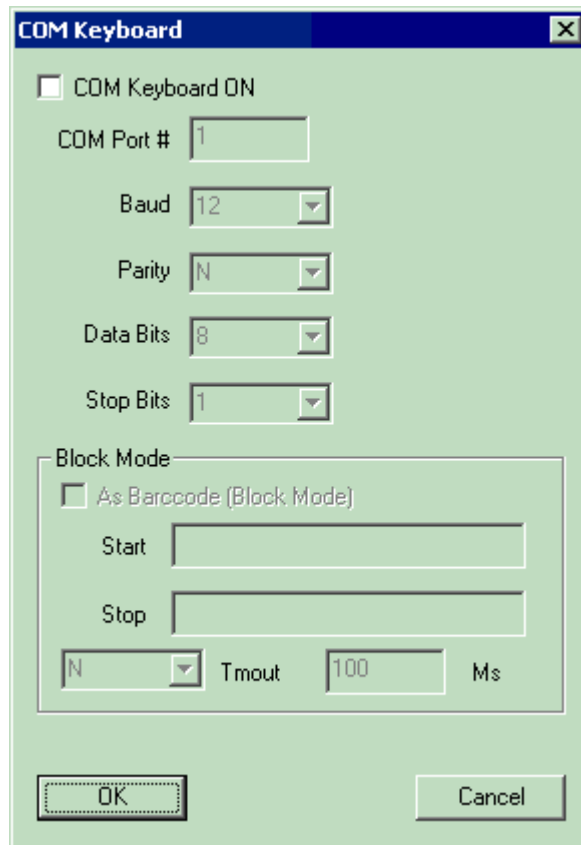
## COM Keyboard

The COM keyboard configuration window allows to set the communications port for input.

Data entered through the COM port is treated as if it were a barcode of type 39, plus it can be processed to detect Start and Stop sequences, in Block Mode.

The parameters need to be set according to the input device's specifications: baud rate, parity, data bits and stop bits.

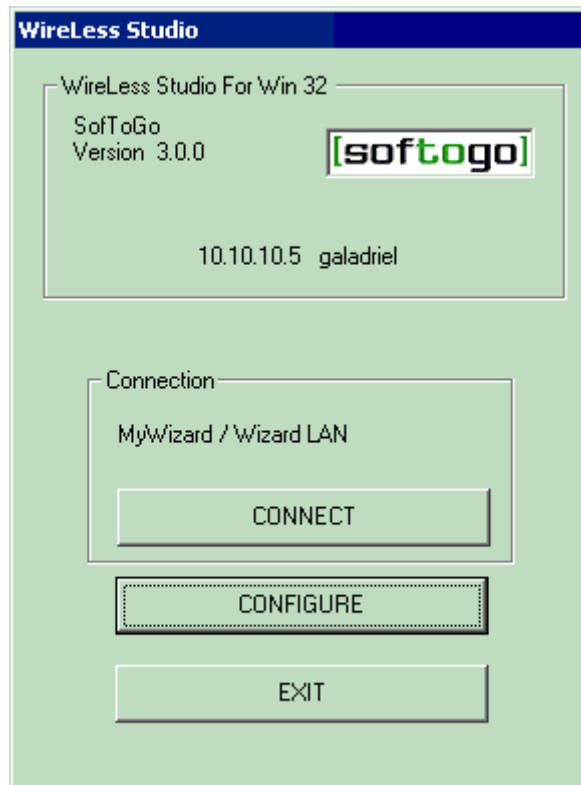
You must also indicate the COM port number.



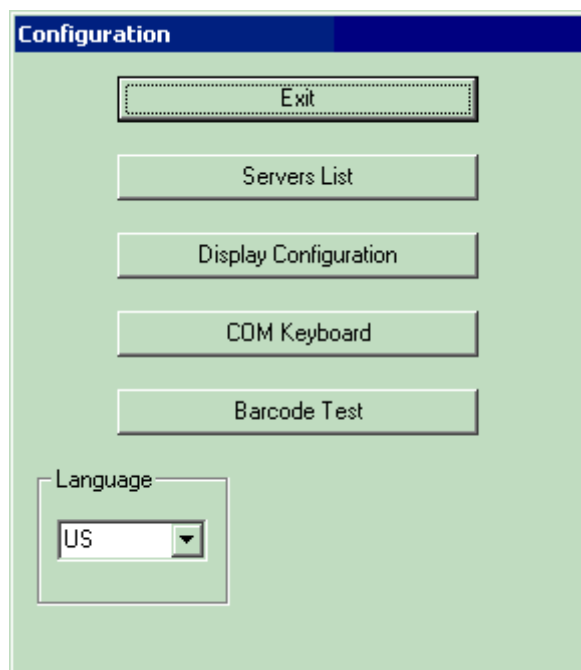
## Scanning

To test the scanner and barcodes :

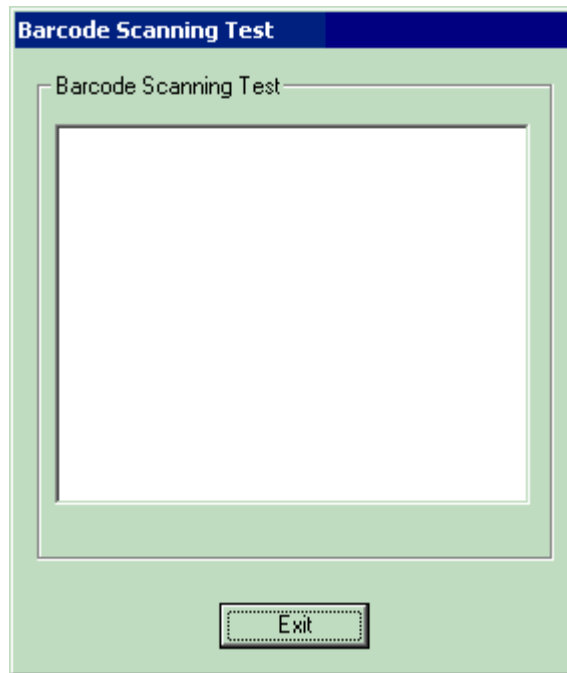
Press the "CONFIGURE" button.



Press the "Barcode Test" button.



Scan a barcode.  
See [COM Keyboard](#).



Press "Exit" to return to previous menu.

## Registry

The Windows Registry is modified as follows during WS Win32 Client installation:

```
[HKEY_CURRENT_USER\Software\SofToGo\WSWin32]
```

```
[HKEY_CURRENT_USER\Software\SofToGo\WSWin32\COMKBD]
```

```
"ComKbdOn"="No"
```

```
"Port"=dword:00000001
```

```
"Baud"=dword:00000001
```

```
"Parity"="N"
```

```
"DataBits"=dword:00000008
```

```
"StopBits"=dword:00000001
```

```
"BlocMode"="No"
```

```
"Sob"=""
```

```
"Eob"=""
```

```
"DoTmout"="N"
```

```
"BlocTmout"=dword:00000064
```

```
[HKEY_CURRENT_USER\Software\SofToGo\WSWin32\DEBUG]
```

```
"Level"=dword:00000000
```

```
"Name"="WSPpc.log"
```

```
[HKEY_CURRENT_USER\Software\SofToGo\WSWin32\DISPLAY]
```

```
"Height"=dword:0000000e
```

"Width"=dword:0000001e  
"ButtonAreaHeight"=dword:00000064  
"ButtonAreaWidth"=dword:000000c8

[HKEY\_CURRENT\_USER\Software\SofToGo\WSWin32\FONT]

"Height"=dword:00000024  
"Width"=dword:00000000  
"Escapement"=dword:00000000  
"Orientation"=dword:00000000  
"Weight"=dword:00000190  
"Italic"=dword:00000000  
"Underline"=dword:00000000  
"StrikeOut"=dword:00000000  
"CharSet"=dword:00000001  
"OutPrecision"=dword:00000000  
"ClipPrecision"=dword:00000000  
"Quality"=dword:00000000  
"PitchAndFamily"=dword:00000001  
"FaceName"="Courier New"  
"FontFactor"=dword:00000010  
"FontIsFix"=dword:00000001

[HKEY\_CURRENT\_USER\Software\SofToGo\WSWin32\HOSTLST]

"Mru"="MyWizard"  
"Last"=dword:00000001  
"Label\_00"="MyWizard"  
"IP\_00"="?"  
"Cnx\_00"=""  
"Port\_00"=dword:000007d1  
"Type\_00"=dword:00000001

[HKEY\_CURRENT\_USER\Software\SofToGo\WSWin32\LANGUE]

"ID"="US"

[HKEY\_CURRENT\_USER\Software\SofToGo\WSWin32\PASSWORD]

"Exit"="exit"  
"Config"="config"

[HKEY\_CURRENT\_USER\Software\SofToGo\WSWin32\PORT]

"Tmout"=dword:0000003c

## • Windows Client

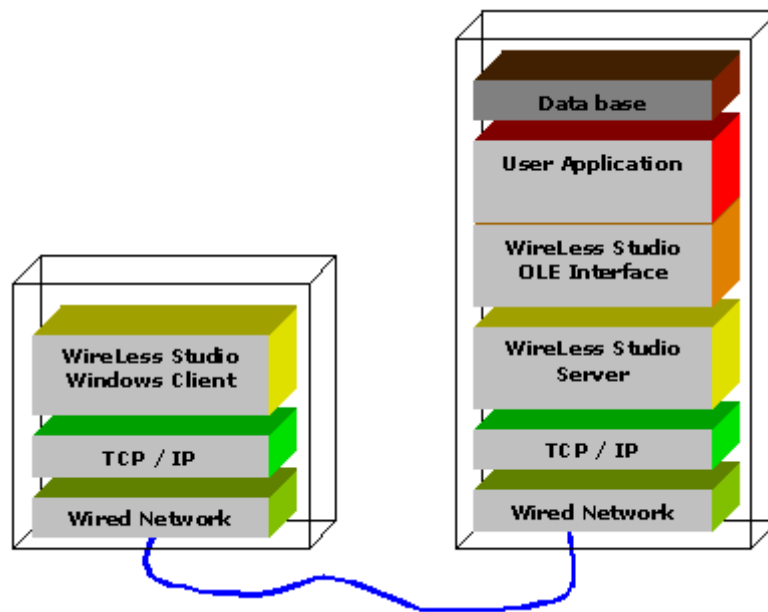
### **Description**

WireLess Studio Windows Client (WSWClient) is a Windows program who emulates a hand-held terminal, and allows to run WireLess Studio applications from a PC.

WSWClient can runs in the same computer as the server (that runs Wireless Studio Server "WSServer") or in another computer connected to the same network than WSServer.

The PC that runs WSWClient must have TCP/IP protocol loaded. See the Administrator's Guide / [Network Configuration](#) / [Windows Client](#).

To install WSWClient only in a PC, see the Administrator Guide / [Installation CD](#) / [WSWClient](#).



## Starting

To launch the program, click on the desktop WSWClient icon:



Or launch it from "Start Menu / Programs / WireLess Studio / Windows Client":

You may select the emulated terminal Display Size before connecting.





You May select the language of the Windows Client messages.



## Connecting

Select the server in the servers list or input the name of a new server (or an IP address).

You may modify the WSServer host port (2001 by default). Then click on the "Connect" button.

If it is not the good IP address or Port, change the configuration



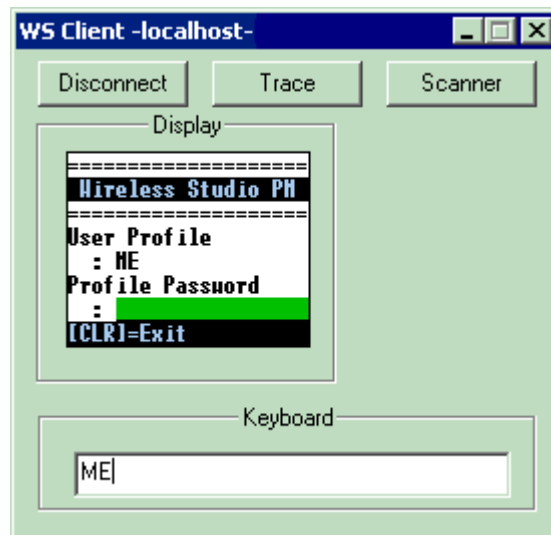
## Sign On

Input the profile name, then hit [ENTER].

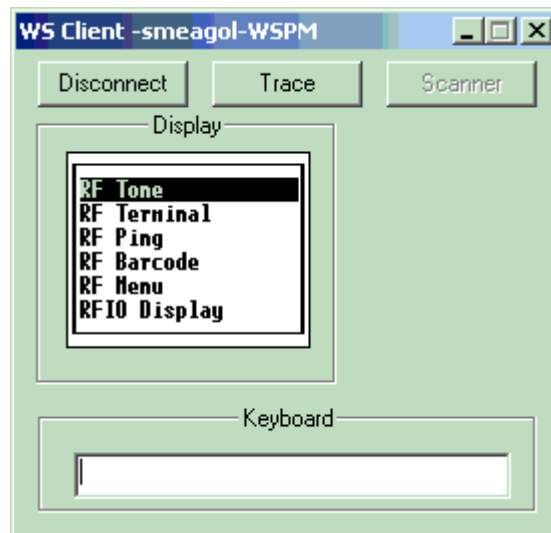
Input the associates profile password, then hit [ENTER].

The terminal's [CLR] key is emulated by the PC's [ESC] Key.

Hit the [ESC] Key to complete disconnect from the WireLess Studio Server or click the "Disconnect" button.

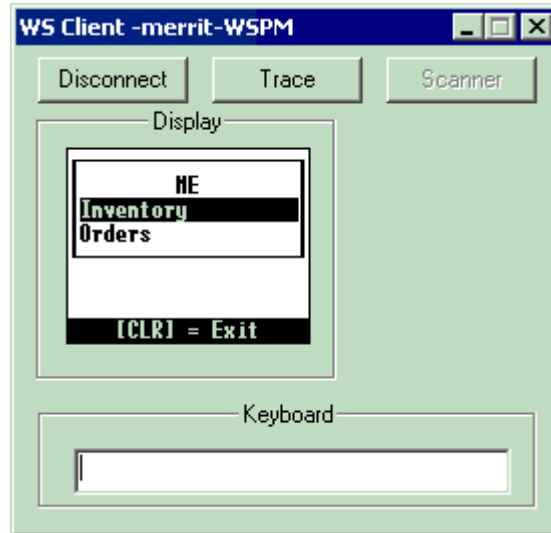


If the "Choice by Menu" and "No Password" options from the Ws Program Administration are selected the screen displayed is as follows:



Move the highlight cursor (in reverse video) with Up or down arrows to select the application, then [ENTER], or key the option number ([1] for the first, [2] for the second, and so on).

Press [CLR] ([ESC]) key to return to the Sign-On screen.

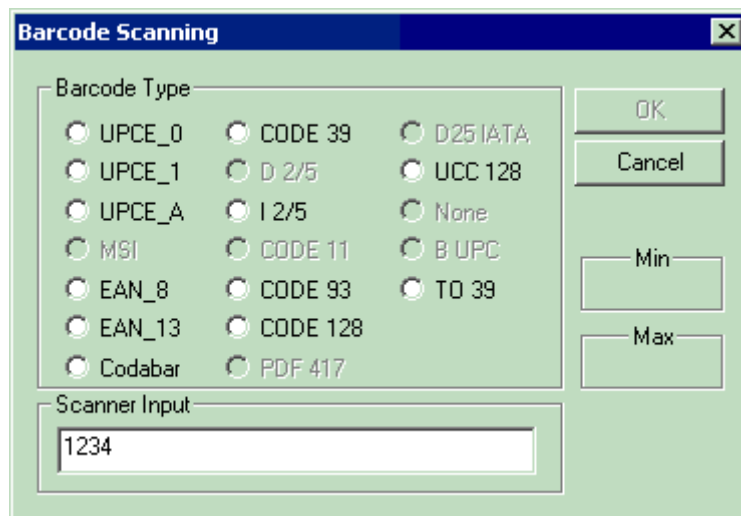


## Scanning

The Windows PC has no built-in scanner. The scanning is emulated by the "Scanner" button that displays this window.

Select the barcode type to simulate the scan, then type the scanner input that must match the Min and Max bounds.

Then click the "OK" button.



# Administrator's Guide

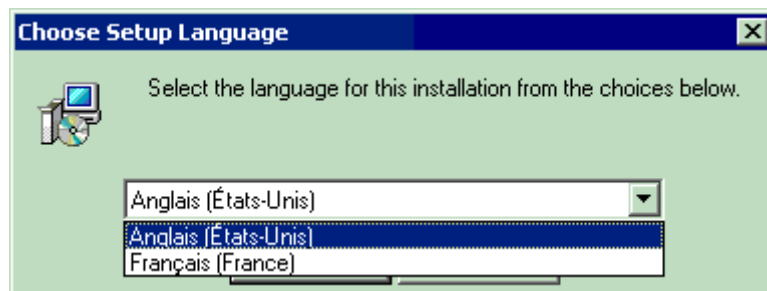
---

## • Installing From CD

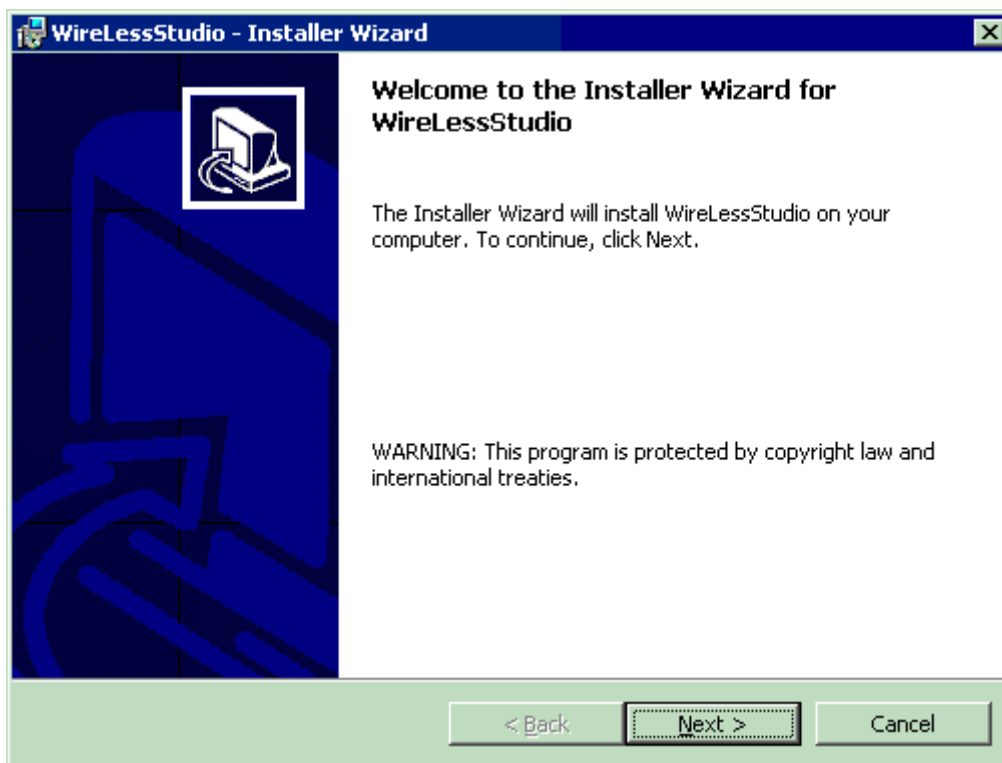
### Starting

Insert the CD in the drive. Then launch the installation program WireLessStudio\_Vxxx.exe.

You can select the language of the installation program.



The Installer Wizard for WireLess Studio.



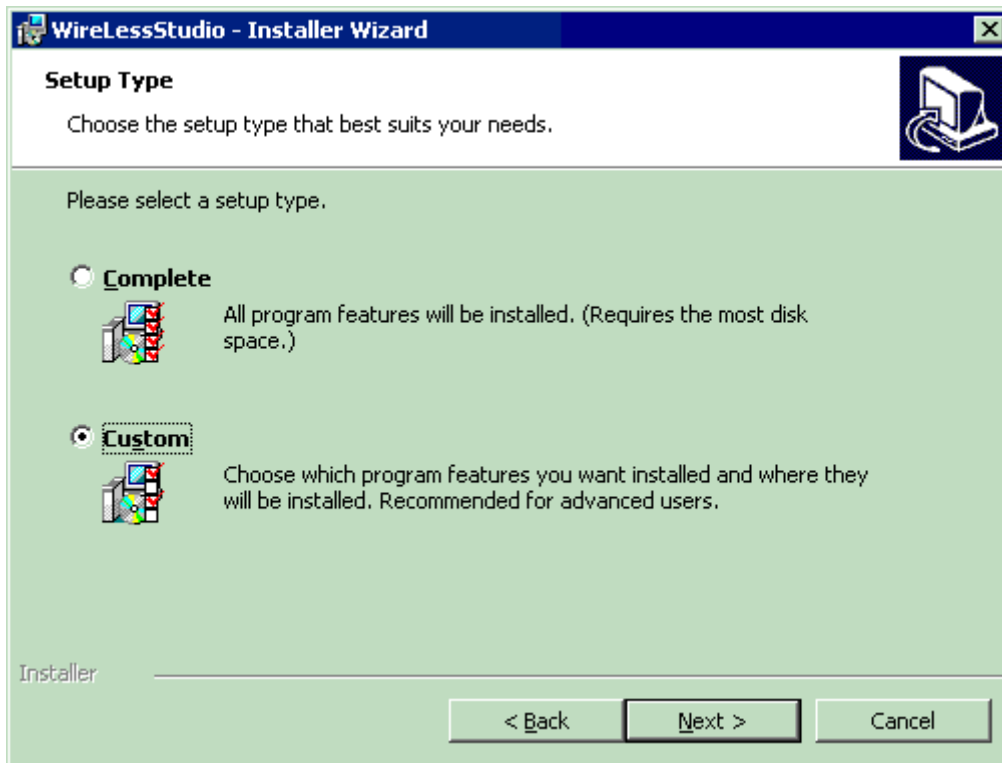
### Components

The components of WireLess Studio are :

<ul style="list-style-type: none"> <li>• The <a href="#">Desktop Server</a> W95/W98/WXP/WNT/W2000</li> </ul>	<p>The server accepts the connections from clients, launches and runs the PC applications. This server (WSServer) needs a user logged in the PC and may be started/stopped from the desktop.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">Service Server</a> WNT/W2000</li> </ul>	<p>The server accepts the connections from clients, launches and runs the PC applications. This server (WSServerSvc) is a NT Service, doesn't need a user logged in the PC, and may be started automatically, and managed from the "Services" control panel.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">Administrator</a></li> </ul>	<p>The Administrator (WSAdm) allows to manage the profiles and applications, view the current connections and shutdown sessions or the server. The administrator allows to input the license code.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">Windows Client</a></li> </ul>	<p>The Windows Client (WSWClient) is a Windows program that emulates a hand-held terminal, and allows to run WireLess Studio applications from a PC.</p>
<ul style="list-style-type: none"> <li>• The Development Libraries</li> </ul>	<p>The development libraries conform a package that contains the Ole interface, some samples and documentation to write Windows programs to drive the terminal clients.</p>
<ul style="list-style-type: none"> <li>• The <a href="#">DOS Client</a></li> </ul>	<p>The DOS Client (WS11_XXX.hex OR WS24_XXX.hex AND WSPdtXX.hex) is the program that runs in the mobile station. A series of installation files for the terminal station are included.</p>

## Full / Custom installation

You can choose a standard installation (full installation) or custom installation that allows you to select the components that you wish install.

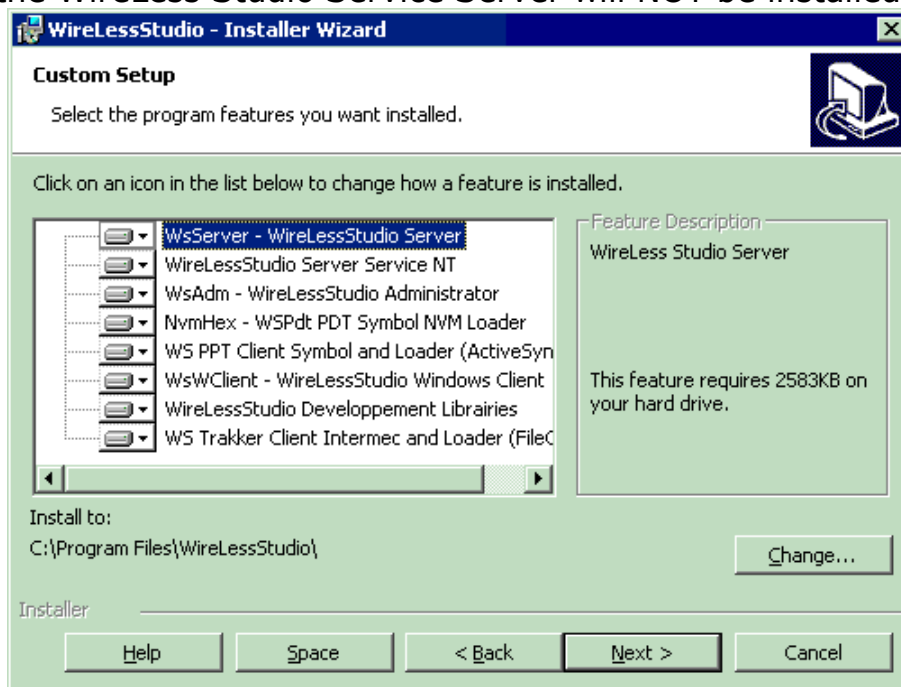


## Full Installation.

The full installation installs all the WireLess Studio components in the PC.

If your computer is running under a WNT or W2000 operating system, the WireLess Studio Service Server will be installed.

If your computer is running under a W95, W98 or WXP operating system, the WireLess Studio Service Server will NOT be installed.



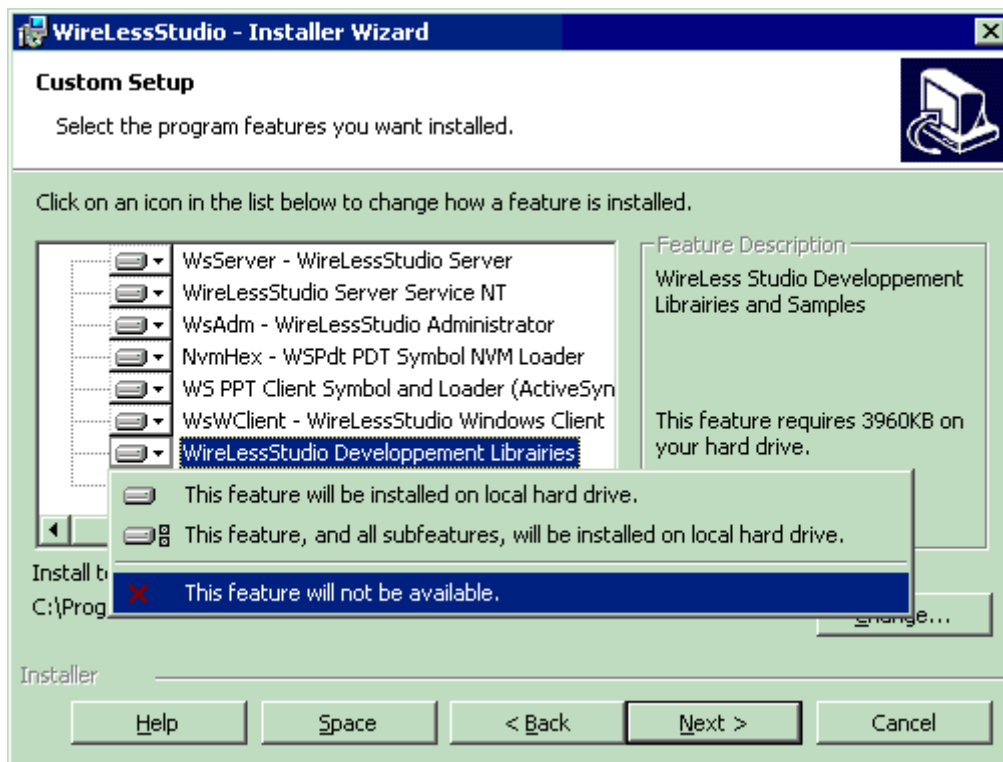
# Custom installation

## Disabling components.

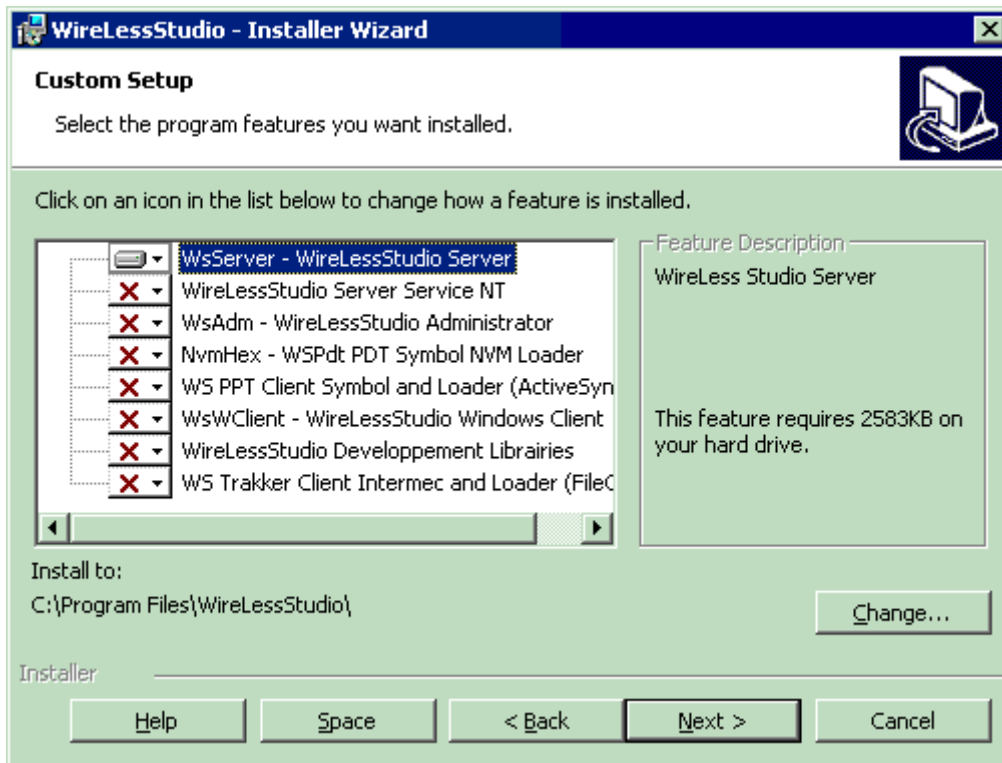
By clicking in each component you may disable each one of them individually, and you may select which ones to install.

You may make any combination of this components to install.

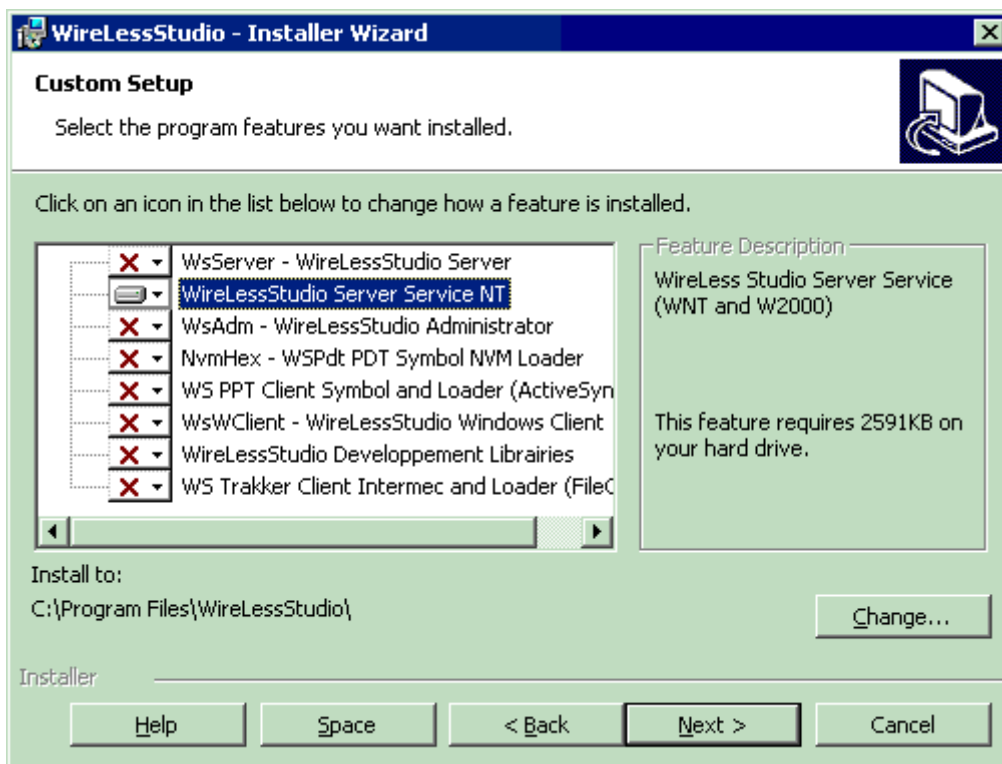
Following, some samples of installation.



**Desktop Server** installation only.

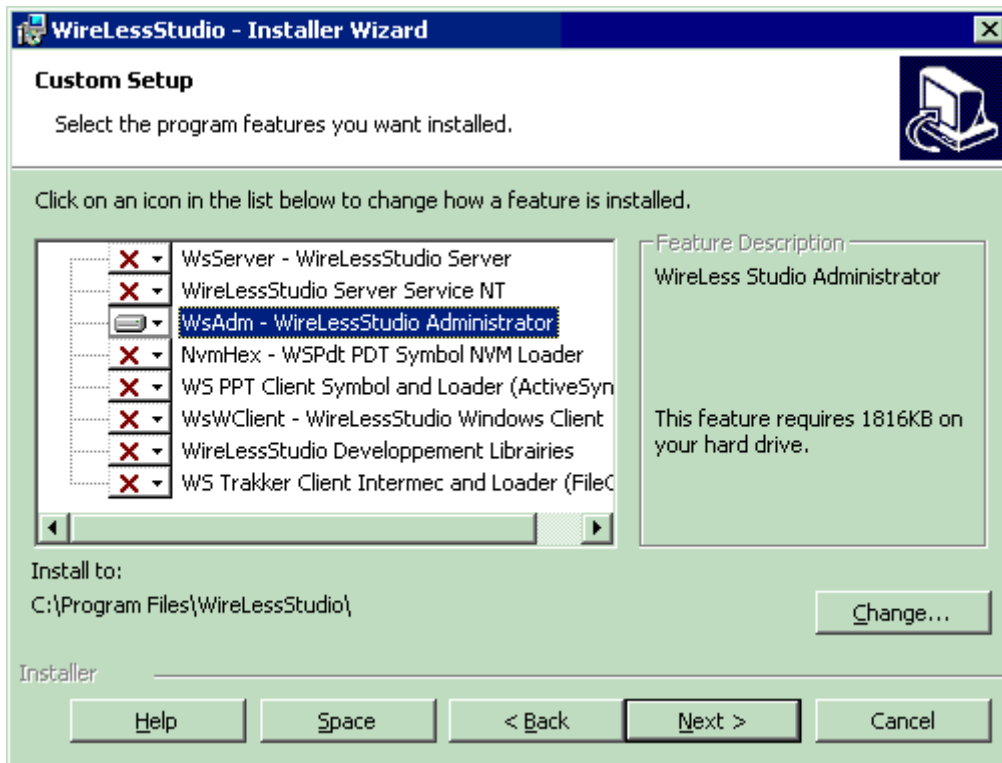


**Service Server** installation only (WNT / W2000).  
 You will not install this component on a W95/W98 or WXP operated PC.

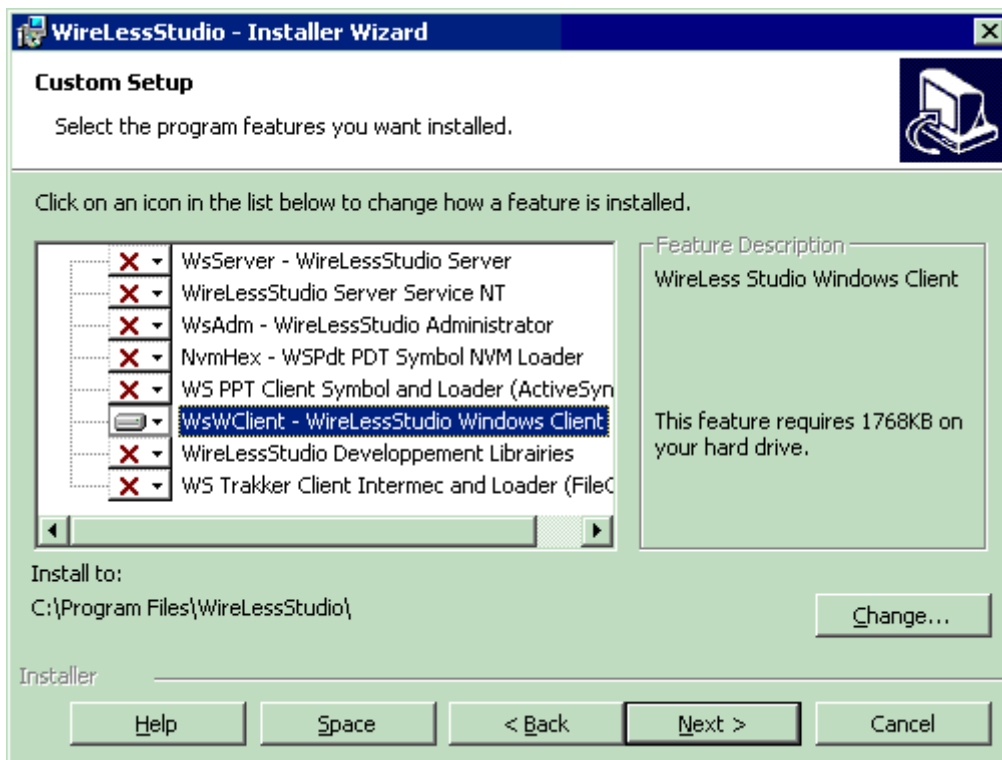


**Administrator** installation only.

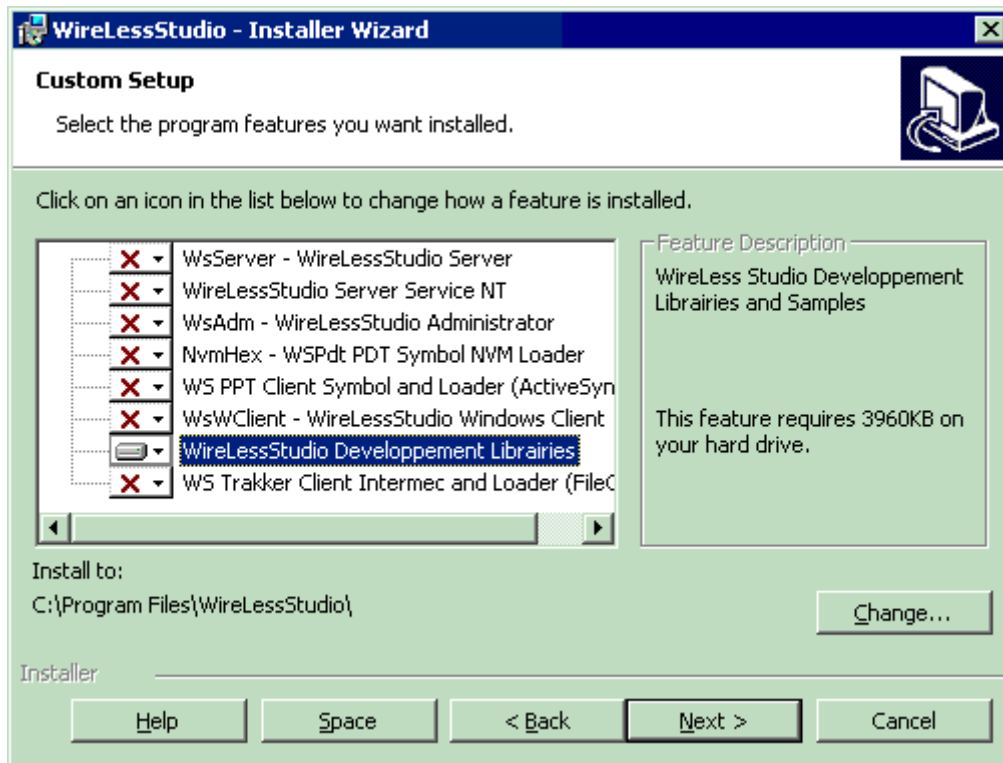




**Windows Client** installation only.

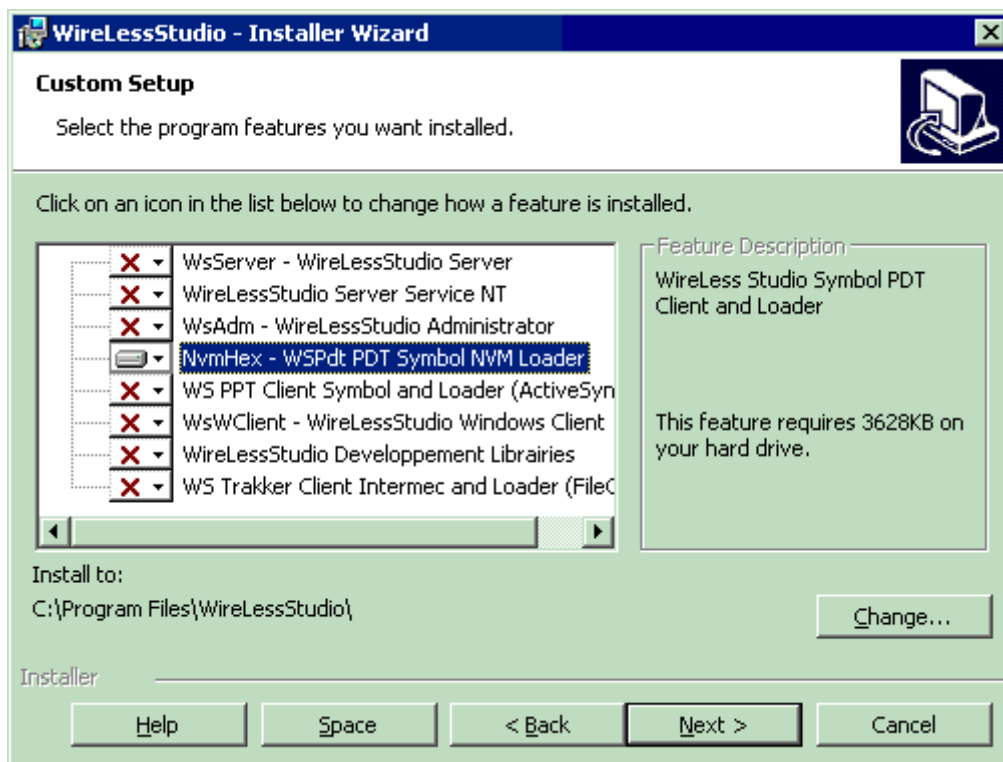


**Development libraries** installation only.



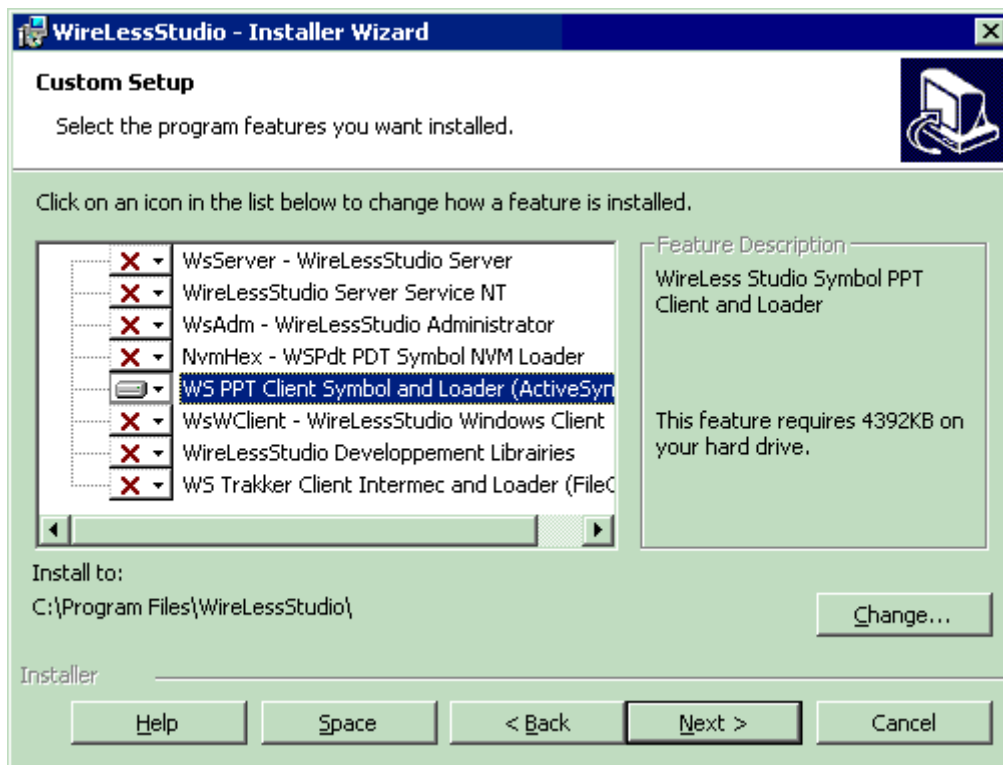
## DOS client

DOS-based series 10xx, 3xxx & 6xxx.



## WinCE client

Windows-CE (Pocket-PC) based series 27xx, 28xx & 81xx.



## Access

When the installation is finished, you will have some shortcuts in the desktop:

- The Desktop Server
- The Administrator
- The Windows Client
- The NVM Loader for DOS & WinCE Clients



In "Start Menu / Programs" you will have a "WireLess Studio" folder with:

- The Desktop server.
- The Administrator.
- The Windows Client.
- DOS and WinCE installation files.
- The NVM Loader for DOS & WinCE Clients.
- Help about NVM Loader.
- Help about WireLess Studio.
- ReadMe (latest information).

## • Installing DOS Client

### Starting

During WireLess Studio installation the folder "Start Menu / Programs / WireLess Studio / WsPpc - Windows CE Clients (Pocket PC)" was created. (See [Installing from CD](#)).

There you will find several files to install the WireLess Studio Client on the terminal stations:




### Connecting

You should connect the TERMINAL to the PC through a serial cable (usually COM1), either directly to the terminal station or to the Cradle.

Microsoft ActiveSync should be installed and running on the PC for the installation to take place.

### Loading

Make sure Microsoft ActiveSync is running on the PC.

Choose the appropriate installation file for your TERMINAL from "Start Menu / Programs / WireLess Studio / WsPpc - Windows CE Clients (Pocket PC)". You may recognize the installation file by the icon .

The installation application will be launched. Follow the on-screen instructions.

### Configuring

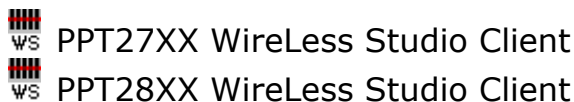
When the program is loaded in the terminal, you will need to configure the TCP/IP protocol (See [Network configuration](#) / [DOS Client](#)) and the Host IP address (See [User's Guide](#) / [DOS Client](#) / [Starting / Configuring](#)).

## . Installing WinCE Client

### Starting

During WireLess Studio installation the folder "Start Menu / Programs / WireLess Studio / WsPpc - Windows CE Clients (Pocket PC)" was created. (See [Installing from CD](#)).

There you will find several files to install the WireLess Studio Client on the terminal stations:




### Connecting

You should connect the terminal to the PC through a serial cable (usually COM1), either directly to the terminal station or to the Cradle.

Microsoft ActiveSync should be installed and running on the PC for the installation to take place.

### Loading

Make sure Microsoft ActiveSync is running on the PC.

Choose the appropriate installation file for your terminal from "Start Menu / Programs / WireLess Studio / WsPpc - Windows CE Clients (Pocket PC)". You may recognize the installation file by the icon .

The installation application will be launched. Follow the on-screen instructions.

### Configuring

When the program is loaded into the terminal, you will need to configure the TCP/IP protocol (See [Network configuration / WinCE Client](#)) and the Host IP address (See [User's Guide / WinCE Client / 2 Starting / Configuring](#)).

# • Network Configuration

Network parameters need to be configured on the Server and Client systems, and sometimes on other network devices.

## 1 Network

### 1.1 Addresses

Ask your Network Administrator for:

#### Network parameters

- The [Default Router](#) (if any)
- The [Subnet Mask](#)

#### PC Server parameters

- Enabling the TCP/IP protocol
- The Server Computer IP address
- Enabling the WireLess Studio port (2001 by default)

#### DOS Client parameters

- The [Terminal's IP](#) address (if [bootp](#) is not used)
- The [ESS Id](#) used by the 802.11 S24 radio network

#### PC Client parameters

- Enabling the TCP/IP protocol

### 1.2 IP Addressing

IP addresses have 4 decimal numbers from 0 to 255. Addresses are provided in "dotted decimal" form. One part of the IP address (the left part) is *"the subnet"* and the rest (the right part) is *"the computer"*.

The subnet Mask determines which numbers of the IP address belong to the left or the right part. The Subnet Mask must be **the same** across the network.

Subnet masks have 4 decimal numbers, usually 0 **or** 255. Subnet masking shows what part of the IP address is *"the subnet"*, and what part is *"the computer"*. **Usually** subnet mask is:

- 255.0.0.0 (The first number is *"the subnet"*, the three others are *"the computer"*).
- 255.255.0.0 (The two first numbers are *"the subnet"*, the two others are *"the computer"*).
- 255.255.255.0 (The first three numbers are *"the subnet"*, the other is *"the computer"*).

## 1.3 Router

See the address of the Server computer, the terminal station and the subnet mask to determine if they are on the same subnet or not.

If the host computer and S24 terminals are on the same subnet, no router is needed.

If the Server computer and S24 terminals are not on the same subnet, a router is needed. The router address **must** be on the same subnet as the terminals.

## 2 Server

Check if the TCP/IP protocol is available in the computer, on the interface connected to the network. See "Network Configuration / [Windows 98](#)" or "Network Configuration / [Windows 2000](#)".

You may modify the server port by editing the WSServer.ini file.

Start the WireLess Studio Server or the NT service.

You may verify the host address accessibility with the "ping" utility from a Windows-based PC.

## 3 DOS Client

The DOS terminal is configured in two steps:

### 3.1 The network and terminal parameters, through the CFG24 utility:

- The [Default Router](#) (if any)
- The [Subnet Mask](#)
- The [Terminal's IP](#) address (if [bootp](#) is not used)
- The [ESS Id](#) used by the 802.11 S24 radio network

The CFG24 utility is called at boot time on the terminal, or it may be called from the main menu by the "S24 Configuration" Option [F3].

```
xxx.xxx.xxx.xxx
WireLess Studio Vx.x
=====
[F1] = CONNECT
[F2] = WS Config.
[F3] = S24 Config.
```

Press [FUNC] [3] to modify the Terminal Network Parameters. The access password is "307".

[See CFG24 Utility.](#)

### 3.2 The Server parameters, through the WS configuration menu.

- The Server Computer IP address or Wizard Id
- The port (standard is 2001)

```

xxx.xxx.xxx.xxx
WireLess Studio Vx.x
=====

[F1] = CONNECT
[F2] = WS Config.
[F3] = S24 Config.

```

Press [FUNC] [2] to configure the WireLess Studio Server IP address or "Wizard Id". The access password is "234".

Select the IP Address of the server or give the "Server Connection Wizard Id", ("?" by default). (See [7 Server Connection Wizard](#)).

```

=====
= Configuration =
=====
Host IP Address
?.....
Port : 2001

[F1] = Cancel

```

Input the WSServer Host IP Address or the Wizard Id, then [ENTER]. Confirm or modify the Port (default is 2001). Select the language of the Client's messages.

```

xxx.xxx.xxx.xxx
WireLess Studio Vx.x
=====

[F1] = US
[F2] = FR
[F3] = SP

```

Press [FUNC] [1] for English.  
 Press [FUNC] [2] for French.  
 Press [FUNC] [3] for Spanish.

## 4 WinCE lient

Get (on-line) the terminal Product Reference Guide for the corresponding terminal:

- [PPT2700 Terminal PRG](#) / [The on-line manual](#) (Symbol).
- [PPT2800 Terminal PRG](#) / [The on-line manual](#) (Symbol).
- [PPT8100 Terminal PRG](#) / [The on-line manual](#) (Symbol).



- [PPT8800 Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-G Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-K Terminal PRG / The on-line manual](#) (Symbol).
- [MC9000-S Terminal PRG / The on-line manual](#) (Symbol).

The WinCE terminal is configured in three steps:

**4.1 The IP network parameters**, through "Start / Settings / Connections / Network / Spectrum24 Wireless" :

- The Default Router (if any)
- The Subnet Mask
- The Terminal's IP address (if bootp is not used)

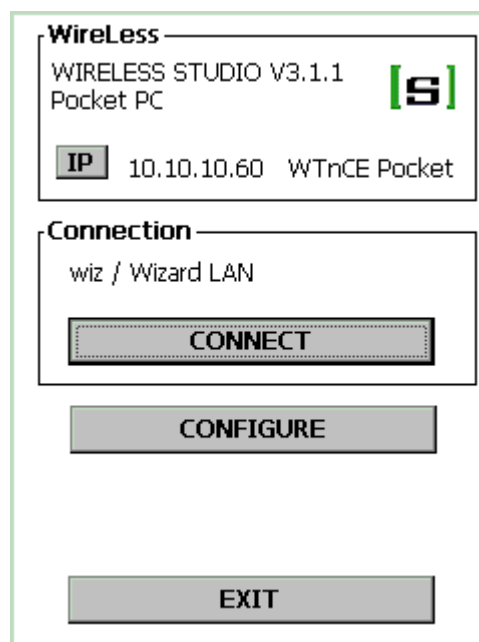
**4.2 The RF network parameters**, through "Start / Settings / System / Spectrum24 settings":

- The ESS Id used by the 802.11 S24 radio network

**4.3 The Server parameters**, through the WS configuration menu

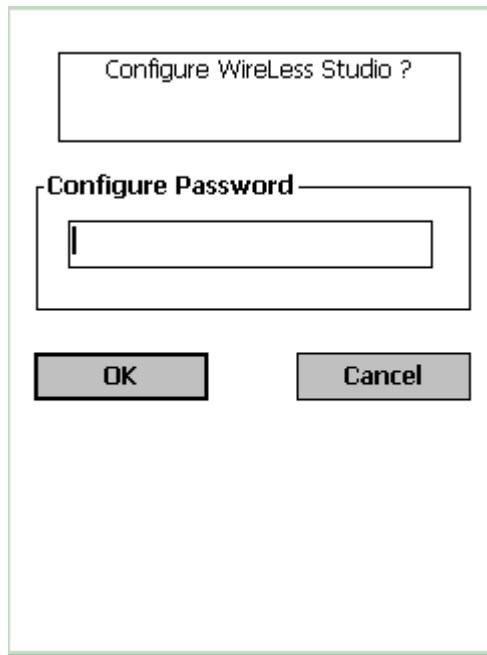
- The Server Computer IP address or Wizard Id
- The port (standard is 2001)

Press the "Configure" button.



**Note:** To renegotiate your IP address with the DHCP server press the IP button.

Enter the config password ("config")



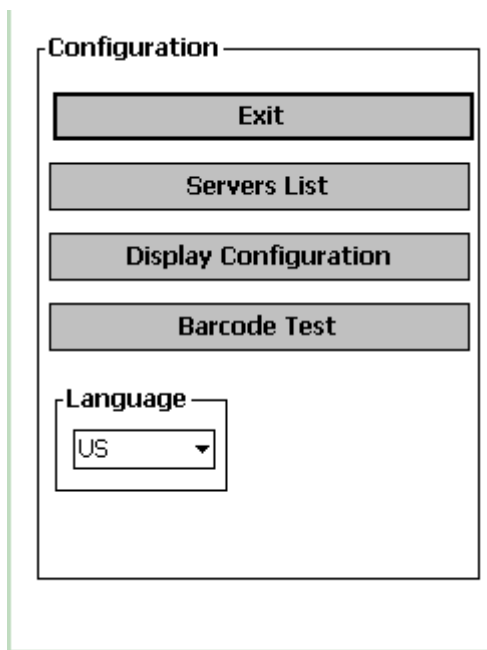
Configure WireLess Studio ?

Configure Password

OK Cancel

The image shows a dialog box titled "Configure WireLess Studio ?". It contains a section labeled "Configure Password" with an empty text input field. At the bottom, there are two buttons: "OK" and "Cancel".

Press the "Server List" button.



Configuration

Exit

Servers List

Display Configuration

Barcode Test

Language

US

The image shows a menu titled "Configuration". It contains four buttons: "Exit", "Servers List", "Display Configuration", and "Barcode Test". Below these buttons is a "Language" section with a dropdown menu currently showing "US".

Click on the row to select or press "New" to add a server.  
Press "Delete" to suppress the selected row.  
The names preceded by a "." (dot) are "wizard" names.  
Modify the port #.  
Press "OK" to validate.



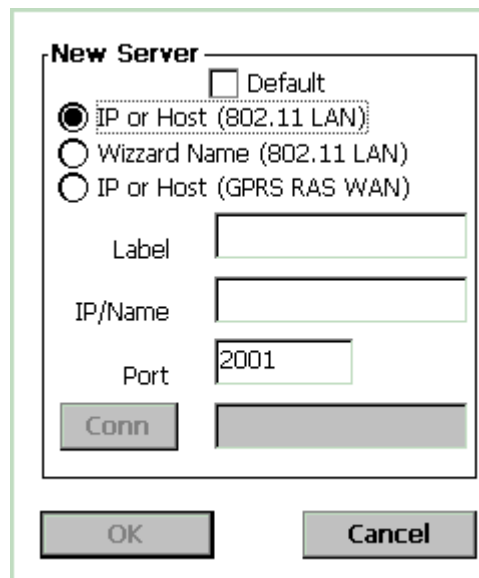
Input the new server name.

Select the name type :

- An IP address or Host name (see "Name Servers" configuration).
- A WS Wizard Name (identifier, or ?).

**Note:** To set the server as default check the box.

Press "OK" to validate.



## 5 Windows Client

If the Windows Client is in the same computer as the WireLess Studio Server you may connect by selecting "localhost" in the server list. (See the User's Guide / [Windows Client Operation](#) or [Win32 Client](#)).

If the Windows Client is in a different computer than the WireLess Studio Server, check if the TCP/IP protocol is available, and if the Host that runs the server may be reached from the PC. See "Network Configuration / [Windows 98](#)" or "Network Configuration / [Windows 2000](#)".

Input the computer name or the IP address of the host that runs the WireLess Studio Server, then click the "connect" button. (See the User's Guide / [Windows Client Operation](#) or [Win32 Client](#))

## 6 Administrator

If the Administrator is in the same computer as the WireLess Studio Server you may connect by selecting "localhost" in the server list. (See Administrator's Guide / [Administrator](#) / [Connecting](#)).

If the Administrator is in a different computer than the WireLess Studio Server, check if the TCP/IP protocol is available, and if the Host that runs the server may be reached from the PC. See "Network Configuration / [Windows 98](#)" or "Network Configuration / [Windows 2000](#)".

Input the computer name or the IP address of the host that runs the WireLess Studio Server, then click the "connect" button. (See Administrator's Guide / [Administrator](#) / [Connecting](#))

## 7 Server Connection Wizard

The server connection Wizard has two functions:

- Resolve network names into IP addresses.
- Balance client connections in a multi-server environment.

### 7.1 Resolve names into IP addresses

The DOS terminals have no DNS features to resolve network names into IP addresses, so it is necessary to input the server's IP address on the terminal. The "Server Connection Wizard" is a task in the server that supplies the names and addresses of the available WireLess Studio servers in the network to the client.

There are three ways to connect to the WS Server:

- **Providing the IP address.** Input the IP address of the server in the WS configuration menu (see [3 DOS Client](#)). The terminal will try to connect to the server at this address.
- **Providing the host name.** Input the Network name of the computer in the "Host IP address" field (see [3 DOS Client](#)). The Wizard will search the computer that matches this name. In the

server, the Wizard Id will be "(hostname)" and the Wizard task will be enabled.

- **Searching all the servers.** Enter "?" in the "Host IP address" field (see [3 DOS Client](#)). The wizard will search for all the computers that have a running WS Server, and displays their Wizard Id (usually the computer name) in a menu (if there is more than one server).

## 7.2 Balance client connections in a multi-server environment.

It there is more than one server running, and you wish to equilibrate the number of the clients in each server (e/g if you have 20 terminals, and 2 servers with 10 connection licenses each one), you may equilibrate the **new** connections to each server.

Replace the default "(hostname)" Wizard Id by another Id (like "MyRfApps") in the **two** servers.

Input "?" or "MyRfApps" in the terminals at the "Host IP address" field (see [3 DOS Client](#)).

The terminal will find two servers with the same Id. Thus the program automatically selects to connect to the server that has the least number of connections running.

## Network Configuration / Windows 98

WilreLess Studio uses the TCP/IP protocol to communicate between the server, the clients and the administrator.

The PC that runs one of this programs must have the TCP/IP protocol activated.

To check or install the TCP/IP protocol in the computer follow the instructions.

### 1 Starting

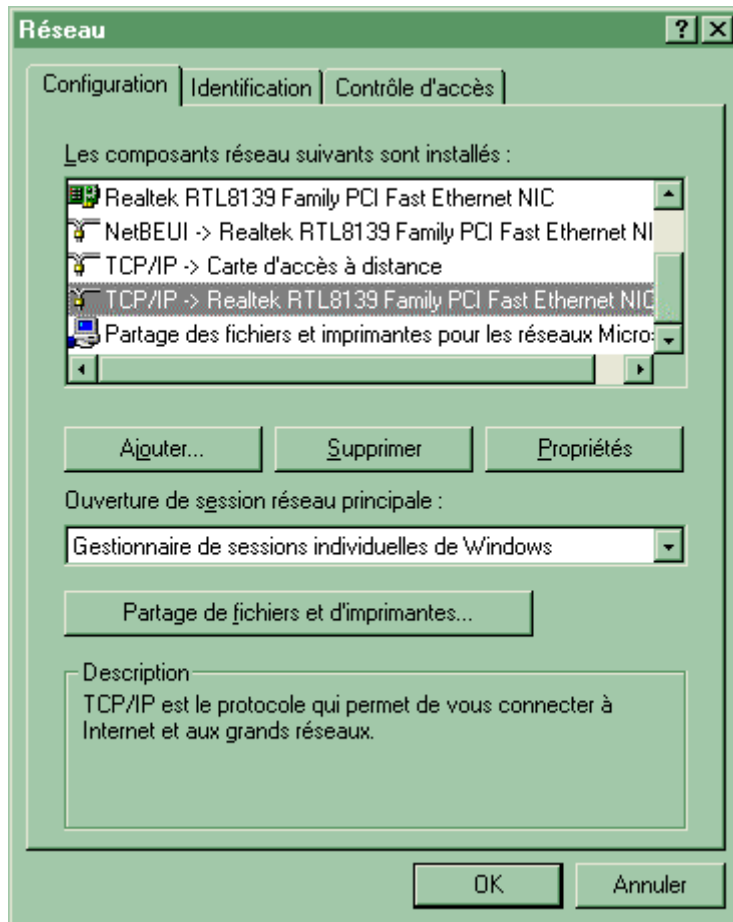
Launch the "Network" control panel from "Start Menu / Parameters / Control Panel / Network".

### 2 Network Components

Check if the TCP/IP protocol is installed over the interface card that is connected to the RF Network.

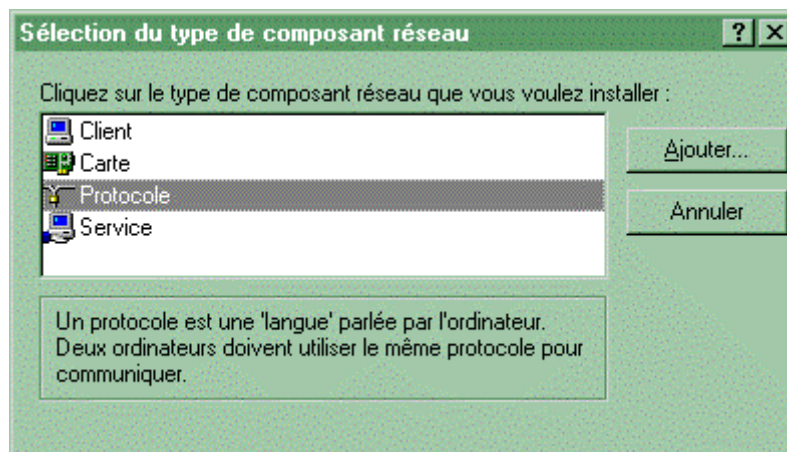
If it is not installed, click on the "Add" button to add the TCP/IP protocol. Follow [step 3](#).

If it is indeed installed, click on the "Properties" button to check the address (You need to know the Host address when connecting the terminals to the server). Follow [step 4](#).



### 3 Adding the TCP/IP protocol

Select the protocol family in the component list, then click on the "Add" button.



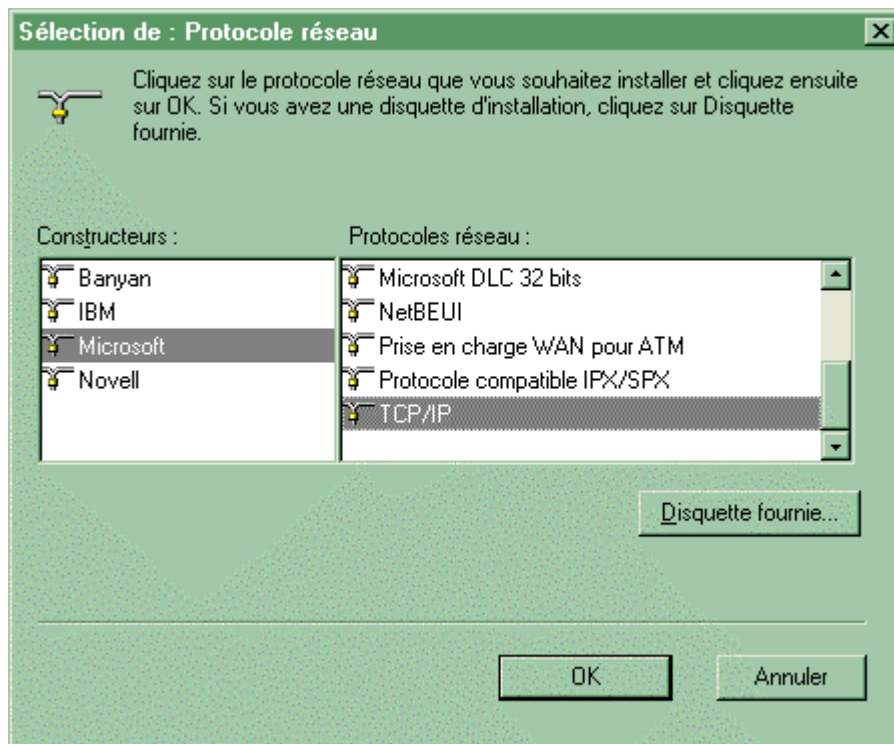
Select the "Microsoft" family and select the TCP/IP protocol. Then click on the "OK" button.

This operation will add the TCP/IP protocol over **ALL** the network interfaces of the PC. If you have other interfaces and you don't want this

protocol to be installed on one of them, in step 2, select the unwanted "Interface<->TCP/IP" associations and click on the "Delete" button.

Configure the protocol as shown in step 4, then click on the "OK" button in the Network control panel.

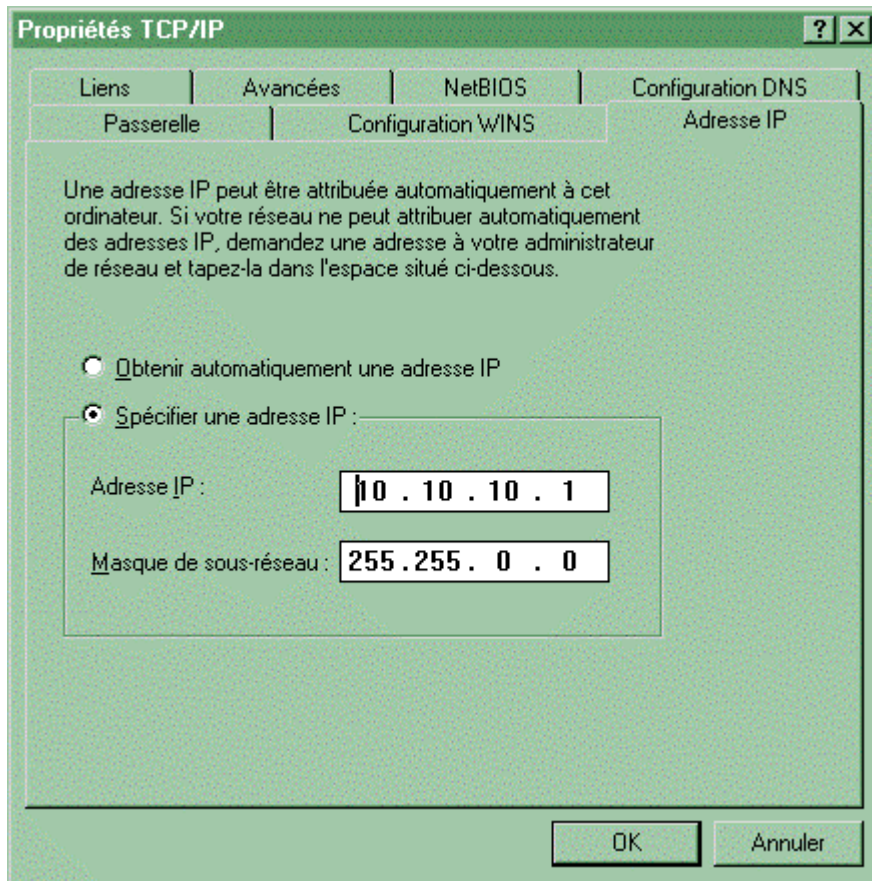
You will need to supply the Windows installation CD, and reboot the PC to validate the new configuration.



## 4 Configuring TCP/IP

Check or input the IP address of the computer.

The Server will need to have a static IP address to allow the terminals to connect to it.



## Network Configuration /Windows 2000

WireLess Studio uses the TCP/IP protocol to communicate between the server, the clients and the administrator.

The PC that runs one of these programs must have the TCP/IP protocol activated.

To check or install the TCP/IP protocol in the computer follow the instructions.

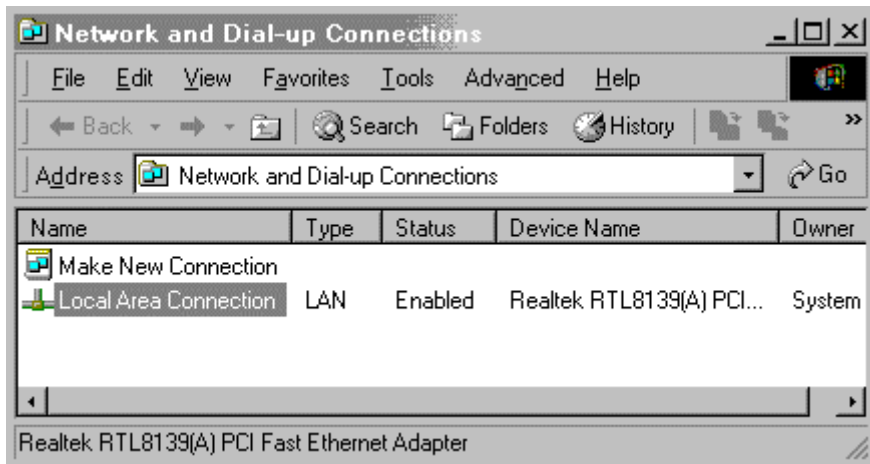
### 1 Starting

Launch the "Network" control panel from "Start / Settings / Network and Dial-Up Connections".

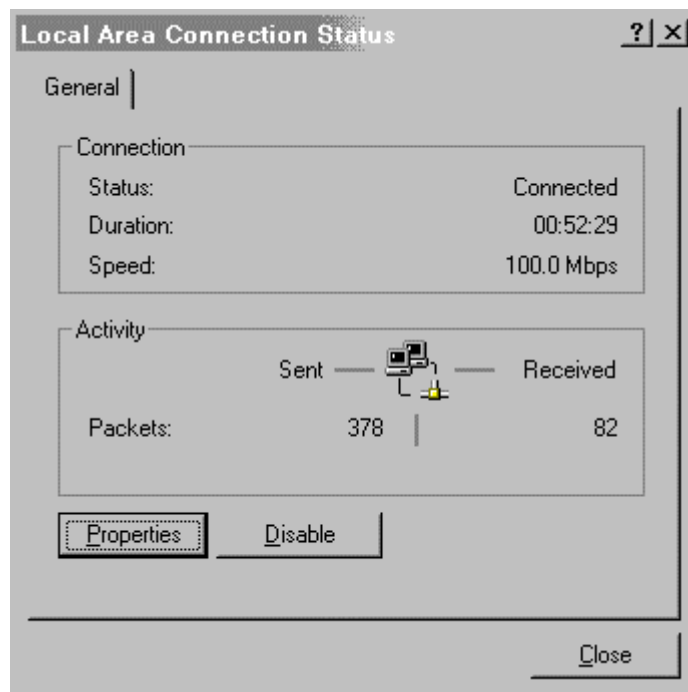
### 2 Network Components

Select the "Local Area Connection" in the Network frame.



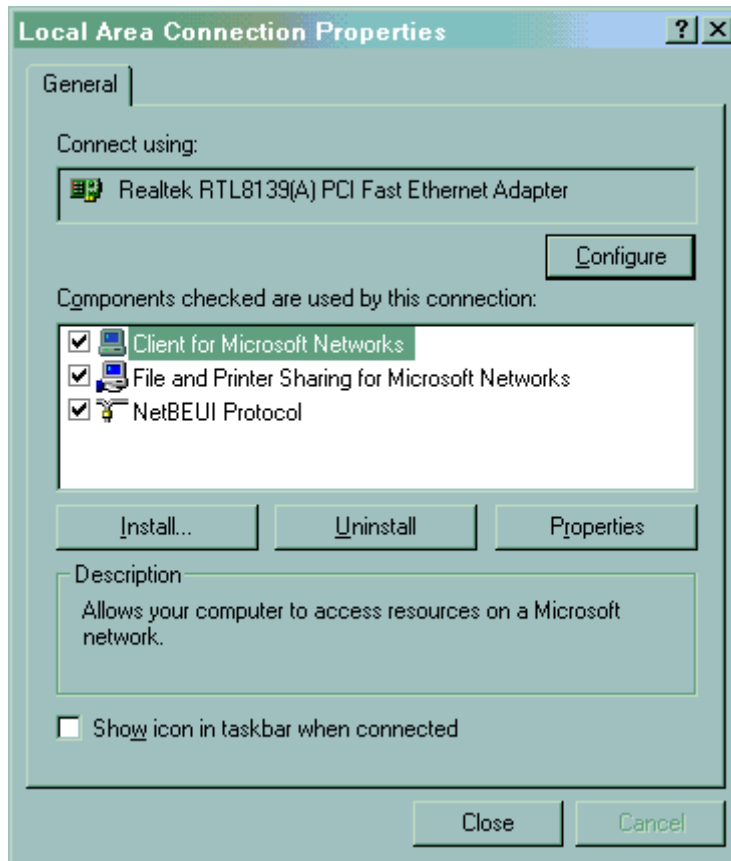


Click the "Properties" button to display the local area network stack list.



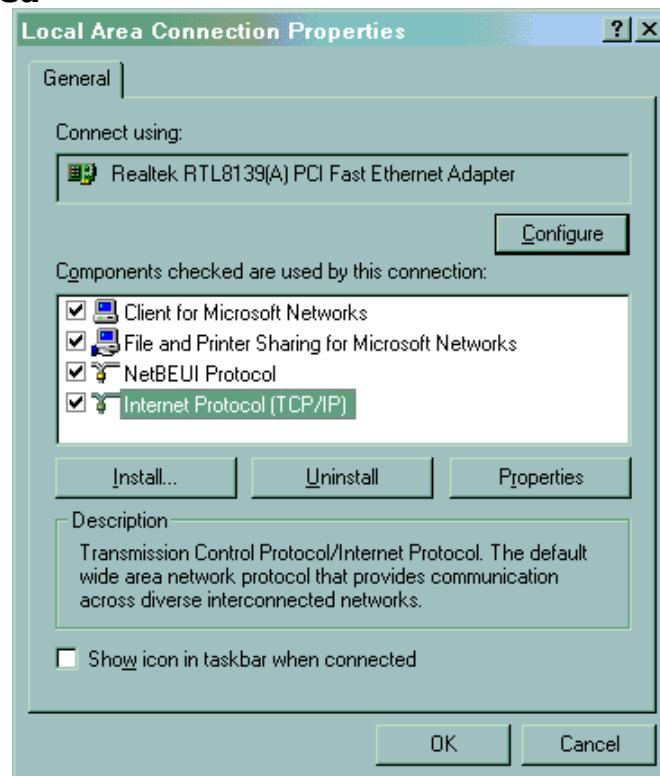
Check if the TCP/IP protocol is installed on the interface card that is connected to the RF Network.

### **TCP/IP Not installed**



If it is not installed, click on the "Install" button to add TCP/IP protocol. Follow [step 3](#).

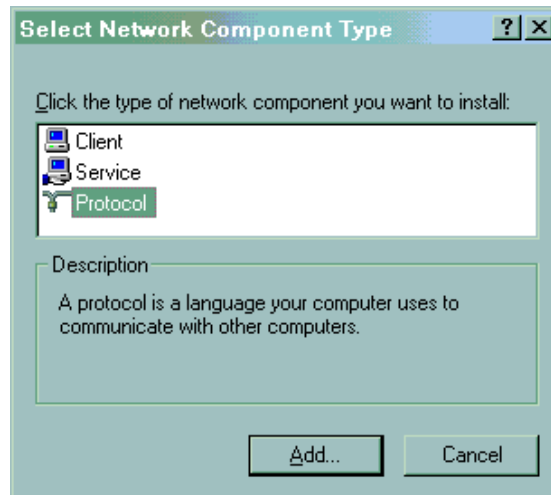
### TCP/IP Installed



If it is indeed installed, select TCP/IP in the list, then click on the "Properties" button to check the address (You need to know the Host address when connecting the terminals to the server). Follow [step 4](#).

### 3 Adding the TCP/IP protocol

Select the protocol family in the component list, and then click on the "Add" button.

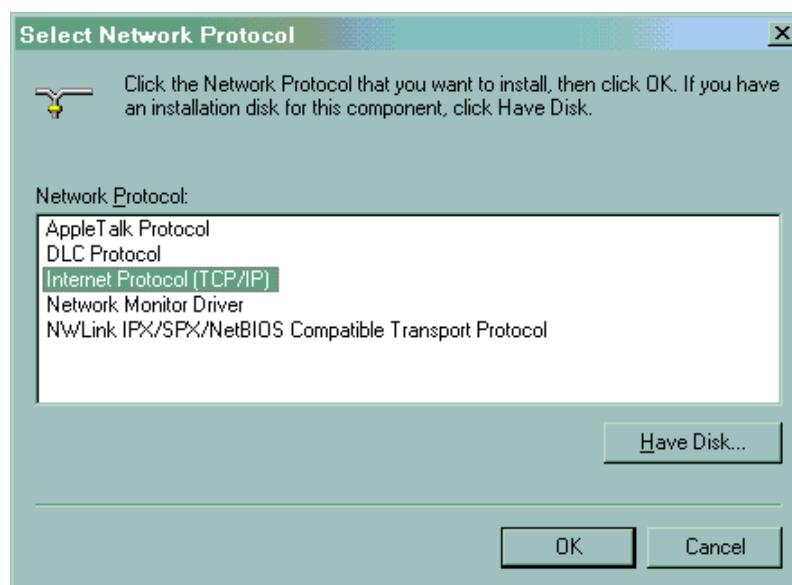


Select the TCP/IP protocol. Then click on the "OK" button.

This operation will add the TCP/IP protocol over **ALL** the network interfaces of the PC. If you have other interfaces and you don't want this protocol to be installed on one of them, in step 2, select the unwanted "Interface<->TCP/IP" associations and click on the "Delete" button.

Configure the protocol as shown in [step 4](#), then click on the "OK" button in the Network control panel.

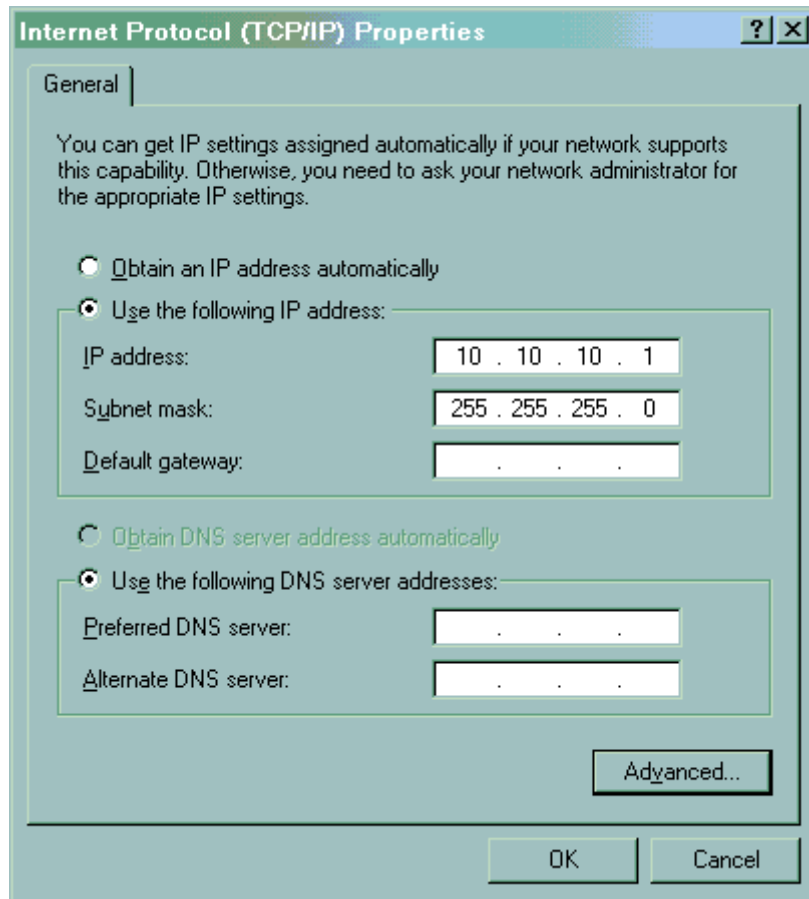
You will need to supply the Windows installation CD, and reboot the PC to validate the new configuration.



## 4 Configuring TCP/IP

Check or input the IP address of the computer.

The Server will need to have a static IP address to allow the terminals to connect to it.



## Network Configuration / DOS / CFG24 UTILITY

### 1 Purpose

The main purpose of this utility program is to enable the terminal operator to configure certain essential parameters for radio communications. This program must be run after the radio driver has been loaded as the configuration parameters are saved in the radio card flash memory which is accessed using radio driver services.

This utility program is called when the terminal boots or by "F3 - S24 Config." from main menu.

### 2 Description

The program provides menus for editing many of the radio configuration parameters used to communicate in a Spectrum24 network.

The values are saved in a buffer in the flash memory of the radio card. The current parameters are set in a text file, NET.CFG, on the RAMdisk. NET.CFG is used both by the radio driver and the TCP/IP stack to obtain their configuration parameters.

## 2.1 Menu

Initially, the program presents a menu as shown below.

```
CONFIGURATOR 2.3x
View config
ESS Id
Subnet Mask
Default Router
MU IP Address
Diversity
MU Sleep Mode
Boot Mode
Pwr Management
Buffers
ReXmit Delay
Rate Control
Scan/RF Op
Int Roaming
Exit
▲▼, Clear, Enter
```

The up and down cursor keys are used to select an option from the menu. The current selectable option is indicated by reverse video. To return to the menu above use the Clear key and to select an option use the Enter key. Using the Clear key in this menu has the same effect as selecting Exit, the configurator terminates execution.

On terminals with small display screens, the top and bottom lines of the above menu are shown and the menu items scroll using the remaining lines of the display.

## 2.2 VIEW CONFIG

```
VIEW CONFIG
Terminal IEEE addr
  00:A0:F8:86:B5:3E
MU IP Address
  10.10.10.12
FW: V4.57 991001
ESS Id = 101
CLR, Enter
```

If "View config params" is selected, the terminal IEEE address (also known as the MAC address), the terminal IP address, the radio firmware version number and date, and the net id, or ESS Id, are displayed. This is NOT a data entry screen. It is provided to display information

frequently required in diagnostic situations. Clear or Enter returns to the main configuration menu.

### 2.3 ESS ID

If the configurator is executing over a radio driver that uses the IEEE 802.11 protocol then this screen has the following format.

```
ESS ID
Enter ESS Id:
101

BkSp, CLR, Enter
```

If "ESS Id" is selected from the main configuration menu, the above screen is displayed. The current setting of the ESS Id is shown in up to 32 ASCII characters and may be changed by backspacing over the current value and typing a new value. Alternatively the current setting can be deleted using Ctrl-D and the new ESS Id entered in its entirety. Enter must be pressed to effect any changes typed.

The ESS Id identifies the radio network and differentiates between different radio networks. All equipment on one 802.11 network must use the same ESS Id.

### 2.4 SUBNET MASK

```
SUBNET MASK
Enter Subnet Mask:
255.255.0.0

BkSp, CLR, Enter
```

If "Subnet Mask" is selected from the main configuration menu, the above screen is displayed. The current setting of the Subnet Mask is shown and may be changed by backspacing over the current value and typing a new value. Enter must be pressed to effect any changes typed. A new value is entered in decimal form and each part of the four part address should be in the range 0 to 255.

### 2.5 DEFAULT ROUTER

```
DEFAULT ROUTER
Enter Default Router
```

```
10.10.0.99  
  
BkSp, CLR, Enter
```

If "Default Router" is selected from the main configuration menu, the above screen is displayed. The current setting of the Default Router is shown and may be changed by backspacing over the current value and typing a new value. Enter must be pressed to effect any changes typed. A new value is entered in decimal form and each part of the four part address should be in the range 0 to 255.

The default router address is the address of the node to which all packets, destined for remote networks, will be sent.

## 2.6 MU IP ADDRESS

```
MU IP ADDRESS  
Enter IP addr:  
10.10.10.12  
  
BkSp, CLR, Enter
```

If "MU IP Address" is selected from the main configuration menu, the above screen is displayed. The current setting of the MU IP Address is shown and may be changed by backspacing over the current value and typing a new value. Enter must be pressed to effect any changes typed. A new value is entered in decimal form and each part of the four part address should be in the range 0 to 255.

**NOTE:** It is only necessary to enter an IP address if the terminal is not going to be allocated an IP address by a boot server or DHCP server. Allocation of an IP address is part of the BOOTP and Dynamic Host Configuration Protocol (DHCP) process.

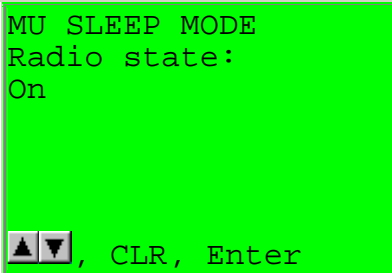
## 2.7 DIVERSITY

```
DIVERSITY  
2 antennas ?  
Yes  
  
▲▼, CLR, Enter
```

If "Diversity" is selected from the main configuration menu, the above screen is displayed. The current setting of the Diversity is shown and may be changed by using the up and down arrow keys to toggle between the two valid settings. Enter must be pressed to effect any change made.

If diversity is set "Yes", the radio firmware will attempt to use both antenna ports for communications. This setting will give better communications if two antennas are used with the radio and distinctly worse communications if only one antenna is used. It is important to match the diversity setting with the number of antennas in use. The LRT3840, PDT3140 and PDT3540 are each equipped with two antennas. The wearable, PDT6140 and PDT6840 have only one antenna and the vehicle mount is frequently used with a single antenna. If there is only one antenna make sure that diversity is set to "No". When using the standard start-up files the diversity is defaulted on terminal type to the expected value as implied by the above hardware antenna configurations.

## 2.8 MU SLEEP MODE



```
MU SLEEP MODE
Radio state:
On

▲▼, CLR, Enter
```

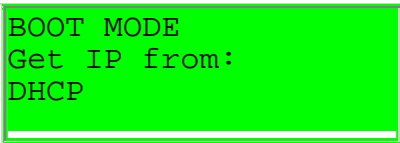
If "MU sleep mode" is selected from the main configuration menu, the above screen is displayed. The current setting of the sleep mode is shown and may be changed by using the up and down arrow keys to toggle between the two valid settings. Enter must be pressed to effect any change made.

If this switch is set ON, the radio is not powered off when an application powers down the terminal due to inactivity. This permits the terminal to be woken-up by a message being directed to the terminal. Broadcast messages will not wake-up the terminal.

If this switch is set to OFF, the radio is powered off when an application powers down the terminal due to inactivity.

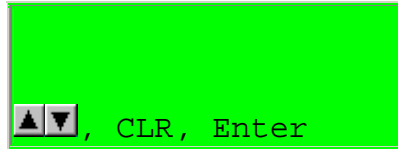
The default value for this parameter is ON.

## 2.9 BOOT MODE



```
BOOT MODE
Get IP from:
DHCP
```





If "Boot Mode" is selected from the main configuration menu, the above screen is displayed. The current setting of the Boot Mode is shown and may be changed by using the up and down arrow keys to toggle between the three valid settings. Enter must be pressed to effect any change made.

If boot mode is set to "Boot", when the terminal is being initialized, a TCP/IP BOOTP request message will be broadcast to the network. Any boot servers on the network should respond if configured to do so. The terminal will accept the first valid response that it receives. The response contains an IP address to be used by the terminal and, optionally, other network parameters. Parameters received in a BOOTP response over-ride any that may have been entered using this configurator.

If boot mode is set to "DHCP", when the terminal is being initialized, a similar process is performed as described above for BOOT mode, except that Dynamic Host Configuration Protocol is used.

Symbol's BOOTP program, which supports the obtaining of network parameters depending on the setting of this configuration parameter, supports the setting of the following network parameters from the BOOTP and DHCP responses:

- Sub-net mask

- Default router - the first address from the router list.

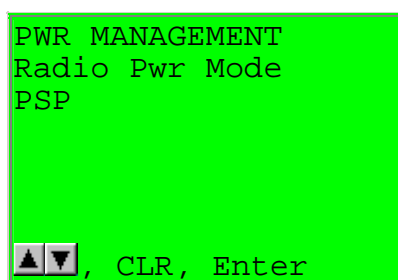
- Terminal IP address

Additionally in DHCP, if both domain name (option 15) and domain name servers (option 6) are returned in the DHCP ACK then a RESOLV.CFG file will be generated which permits the stack to attempt to resolve network names from the domain servers offered.

If the boot mode is set to "Manual entry", then no configuration messages are broadcast to the network and the current values of the network parameters, saved in the radio flash, are used to connect to the network.

"Manual entry" is the default setting of this parameter.

## 2.10 PWR MANAGEMENT

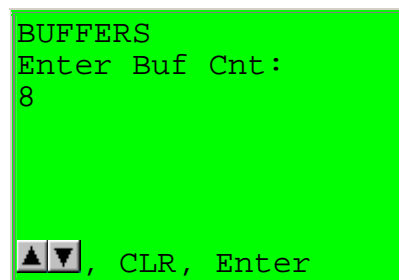


If "Pwr Management" is selected from the main configuration menu, the above screen is displayed. The current setting of power management is shown and may be changed by using the up and down arrow keys to toggle between the two valid settings. Enter must be pressed to effect any change made.

If power management is set to PSP, the default, the radio is powered up only when there is traffic on the network. This mode adapts to the radio activity to decide how long the radio will be powered down. Because the radio will not always be in a ready state when a message is available to be sent to it, this mode does slow response times.

If power management is set to CAM, the radio is always ready to receive. In this mode, battery life is dramatically reduced. This mode is not recommended for any terminal that runs on integral nickel cadmium, metal hydride or alkaline batteries. Vehicle mount terminals should be set to CAM mode.

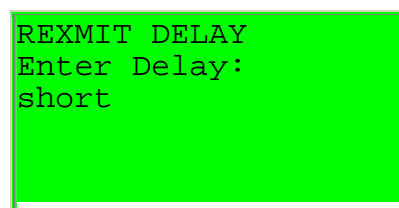
## 2.11 BUFFERS

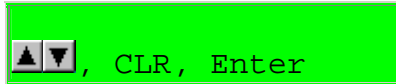


If "Buffers" is selected from the main configuration menu, the above screen is displayed. The current setting of the input buffer count is shown and may be changed by using the up and down arrow keys to toggle between the three valid settings. Enter must be pressed to effect any change made.

This parameter is the number of buffers allocated for frames from the radio. It is recommended that this parameter be left at the default value (currently 8). Two other settings are allowed, 4 or 12. Increase the count to 12 to overcome performance issues if your application can bear this use of memory resources. Reduce the count to 4 if your application has memory resource problems.

## 2.12 REXMIT DELAY

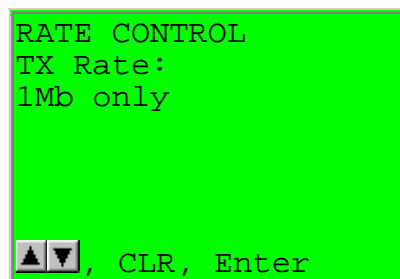




If "ReXmit Delay" is selected from the main configuration menu, the above screen is displayed. The current setting of the retransmission delay is shown and may be changed by using the up and down arrow keys to toggle between the two valid settings. Enter must be pressed to effect any change made.

This parameter is the minimum delay that the TCP/IP stack software will wait before retrying unacknowledged frames. There are two possible values "short" that equates to half a second and "long" that equates to a full second. These values are set high to allow for the radio technology. To preserve battery life, the radio is powered down as much as possible. These timeout values minimize spurious retries due to wireless responses being delayed until the terminal radio is powered up.

### 2.13 RATE CONTROL

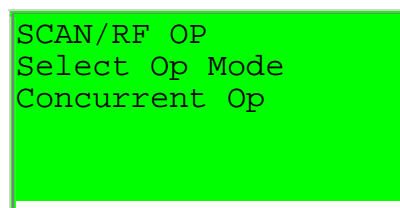


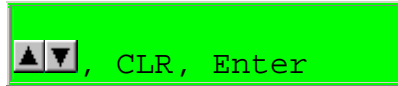
If "Rate Control" is selected from the main configuration menu, the above screen is displayed. The current setting of the transmission rate is shown and may be changed by using the up and down arrow keys to toggle between the three valid settings. Enter must be pressed to effect any change made.

With the new radio, there is potential for either fixing the radio transfer rate at 1Mbps or at 2Mbps. There is an adaptive setting that will use 2Mbps until it experiences difficulties when it will automatically back-off to 1Mbps.

If the configurator senses that the radio is only capable of 1Mbps transmission, this parameter will display as "1Mb only" and will not permit any change.

### 2.14 SCAN / RF OP





If "Scan/RF Op" is selected from the main configuration menu, the above screen is displayed. The current setting of the Scan/RF operating mode is shown and may be changed by using the up and down arrow keys to toggle between the two valid settings. Enter must be pressed to effect any change made.

The two options are concurrent operation and "Scan stops RF". In this second mode the radio is locked out of transmitting while the scanner is being used. This has previously been the manner in which the 300 series terminals have worked. The concurrent operating mode is new and the default. The concurrent mode should be more convenient for aggressive scanning applications where previously it was possible to lock out the radio for long enough to lose association with the AP.

# • WireLess Studio Administrator

## 1 Description

The WireLess Studio Administrator (WSAdm), allows to manage:

- The client network connections
- The profiles and application programs
- The server

WSAdm can run on the same computer as the server (that runs the Wireless Studio Server "WSServer") or on another computer connected to the same network as WSServer.

The PC that runs WSWClient must have the TCP/IP protocol loaded. See the Administrator's Guide / [Network Configuration](#) / [Administrator](#). To install just WSAdm on a PC, see the Administrator Guide / [Installation CD](#) / [Administrator](#).

## 2 Starting

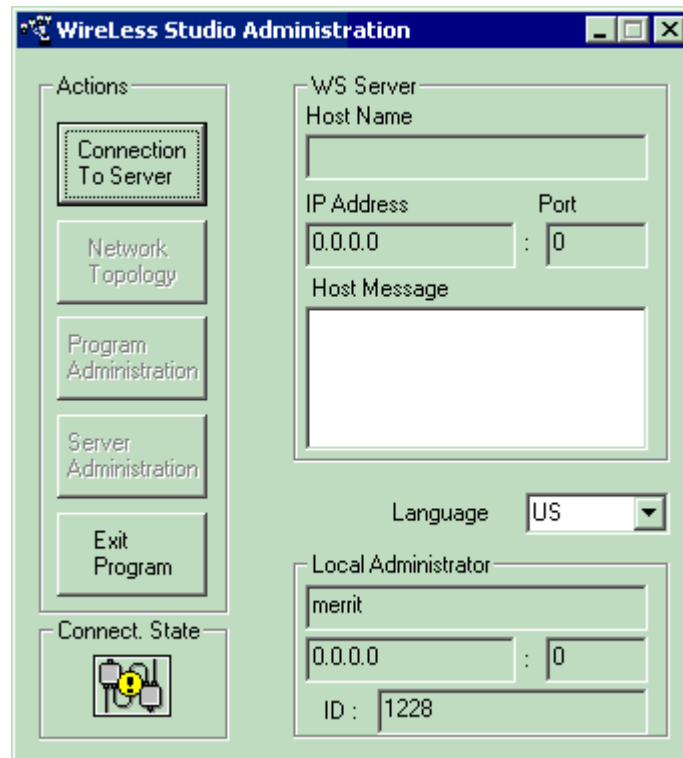
To launch the program, click on the desktop WSAdm icon:



Or launch it through "Start Menu / Programs / WireLess Studio / WireLess Studio Administrator"

## 3 Connecting

You must connect to one server to access the administrator tasks. Click on the "Connection to Server" button.

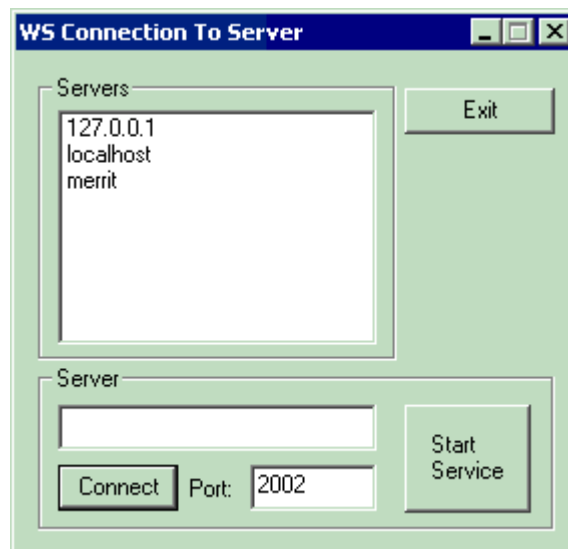


Select the server from the list or input the name of a new server (or an IP address) .

You may modify the WSServer administration host port (2002 by default).

Then click on the "Connect" button.

If the IP address or port are not correct, change the configuration.



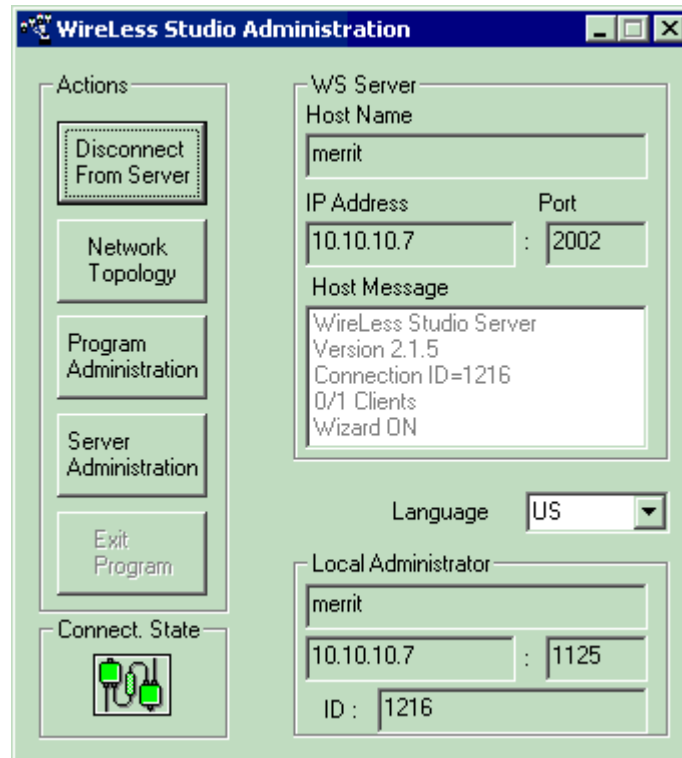
## 4 Administrator control panel

While connected to a server, you are able to manage :

- The client network connections

- The profiles and application programs
- The server

To close the current connection click on the "Disconnect From Server" button.



## 5 Network Topology

### 5.1 Main Window

The list shows the clients connected on the server by IP address and connection port.

The icon indicates a windows or DOS client.

Select a client from the list to display its details.

The screen is refreshed every 5 seconds by default.

#### **WS Client frame**

Details of the TCP/IP connection.

#### **WS Server frame**

The state of the server process that maintains the two connections. *The connection number (No) allows to find the log file of this process.*

#### **User Application frame**

Details of the connection with the user application.

#### **Actions Frame**

To shutdown a connection, click on the "shutdown" button. The server asks the client and the application to terminate the connection.

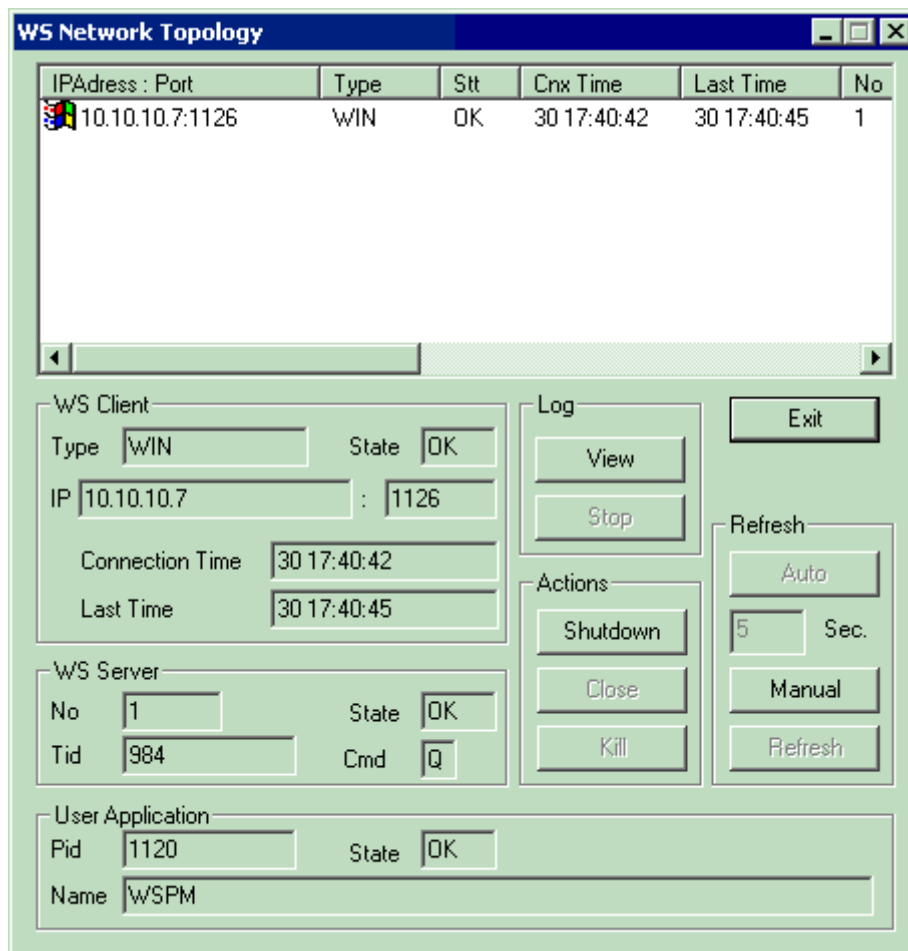
If the application does not shutdown, you should click on the "Close" button, that sends a Windows shutdown signal to the application.  
If the application does not shutdown, you should click on the "Kill" button, that performs a Windows shutdown.

### Refresh Frame

Allows to manage the refresh view mode and time. Automatic or Manual mode (clicking on the "Refresh" button).

### Log Frame

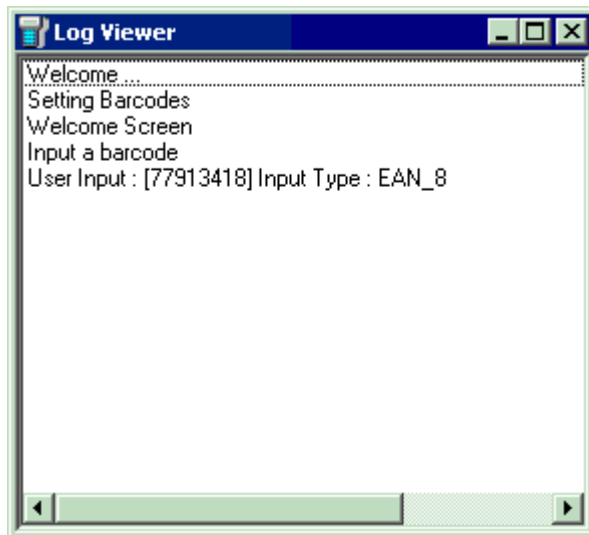
Allows to display (View) or hide (Stop) the Log viewer window for the selected client (data sent by the user application).



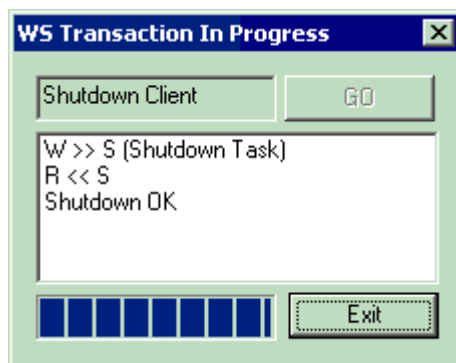
## 5.2 Log Viewer

The Log Viewer window is linked to the selected client in the list.  
Click on the "Stop" button (in the Network Topology window) to close this window.





This dialog box allows to confirm or cancel the shutdown task action.



## 6 Program Administration

### 6.1 Profiles and Applications

A profile identifies a user or a group of users. A password is associated to each profile.

A profile groups one or more WireLess Studio applications.

Each application has a title (displayed to the user) and an executable path.

The user is asked for the profile and password at sign-on time. Then the list of available applications for this profile is displayed and the user is able to choose among them for execution.

Profiles and applications are managed by the WireLess Studio Program Manager (WSPm) that is the default executable file launched by the server. You may bypass the sign-on process by replacing the program manager by your own WireLess Studio application.

### 6.2 Program Administration control panel

The program administrator has some default profiles and sample applications.

If you select a profile from the "Profiles" frame, the "Applications" frame displays the associated programs. The "Application" frame displays the detail of the selected application in the application list.

### **Profile Input** Frame.

Allows to modify the profile name and password input mode for the "Program Manager" (WSPm).

Choice by Menu: the profile will be typed by the user or selected from a menu.

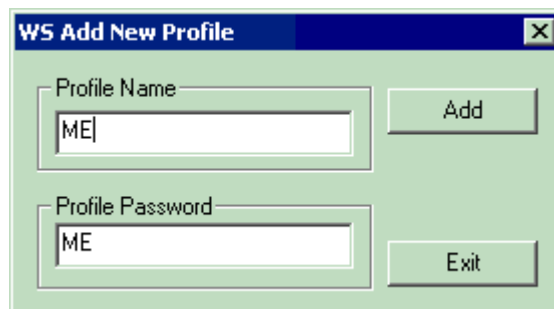
No Password: the profile password will be asked to the user or not.

## **6.3 Adding and deleting profiles**

### **Adding a profile.**

Click on the "New" button in the "Profiles" frame.

Input the new profile name and password (by default the same), and then click the "Add" button.



### **Deleting a profile.**

Select a profile from the profile list.

Click on the "Delete" button in the "Profiles" frame.

Confirm with the "Yes" Button in the "Delete Profile" message box.



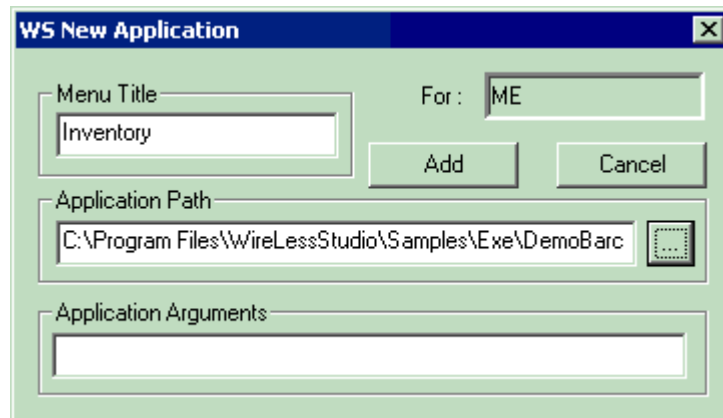
## **6.4 Adding and deleting applications**

### **Adding an application.**

Select the profile to manage in the profiles list.

Click on the "New" button in the "Applications" frame.

Input the application title (displayed to the user in the initial menu).  
Input the full application path (path and file name) or browse by clicking on the "..." button.  
Input (if any) the application arguments (passed in the command line).



### **Ordering applications.**

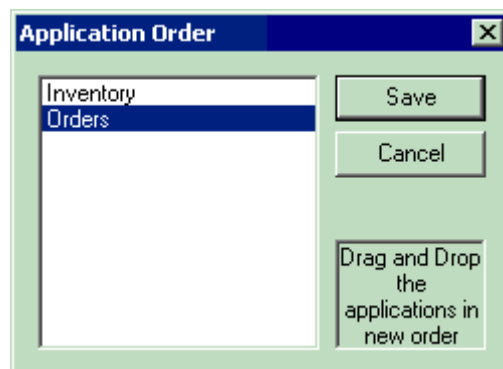
You may modify the order in which the applications are displayed to the user in the initial menu.

Select the profile to manage in the profiles list.

Click on the "Order" button in the "Applications" frame.

Drag and drop the applications to put them in the new order.

Click on the "Save" button to validate the modifications, or the "cancel" button to return without modifications.



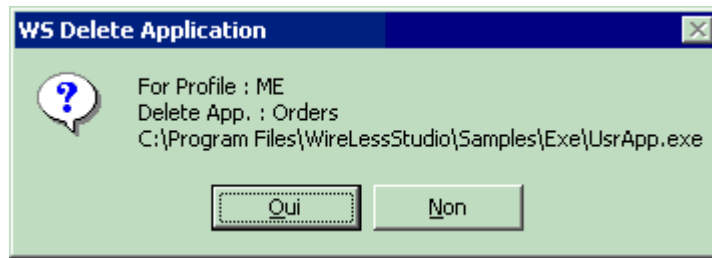
### **Deleting applications**

Select the profile to manage in the profiles list.

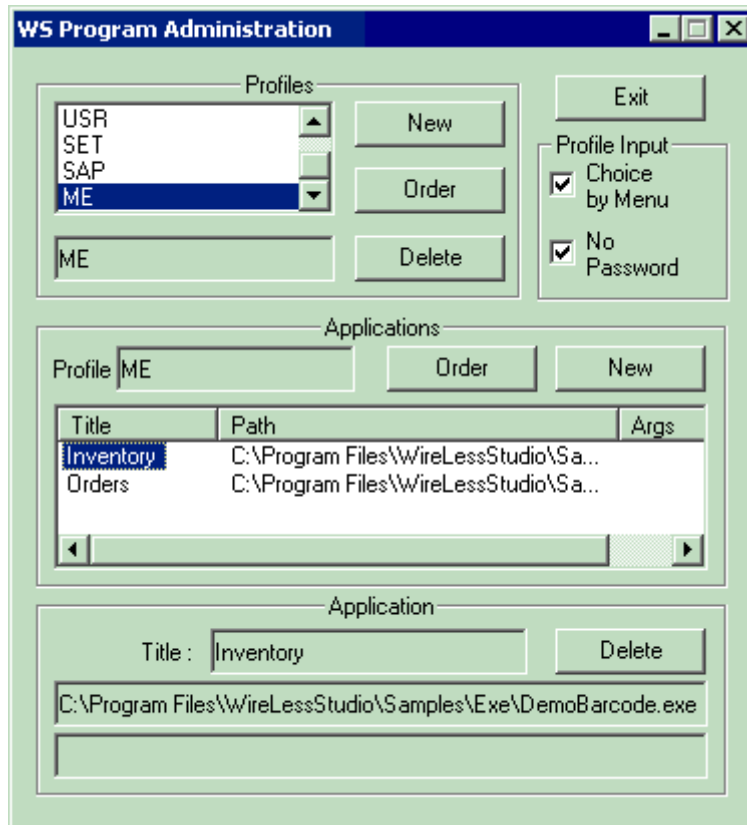
Select the application to delete in the applications list.

Click on the "Delete" button in the "Application" frame.

Confirm with the "Yes" button in the "Delete Application" message box.



A New profile "ME" with several applications "Inventory" and "Orders".



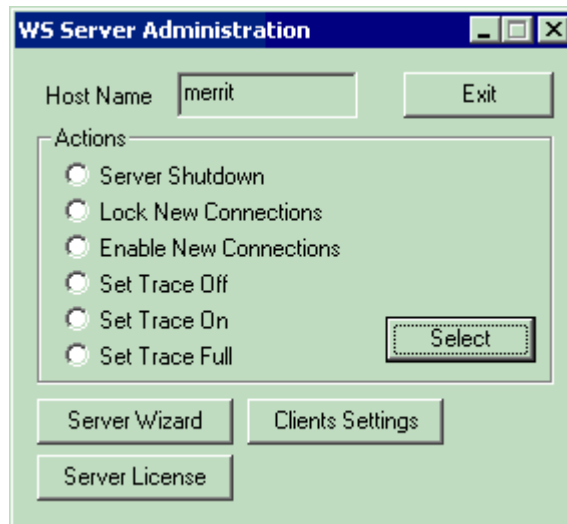
## 7 Server Administration

The server administrator allows to modify the server behavior and the server license.

### 7.1 Server administration control panel

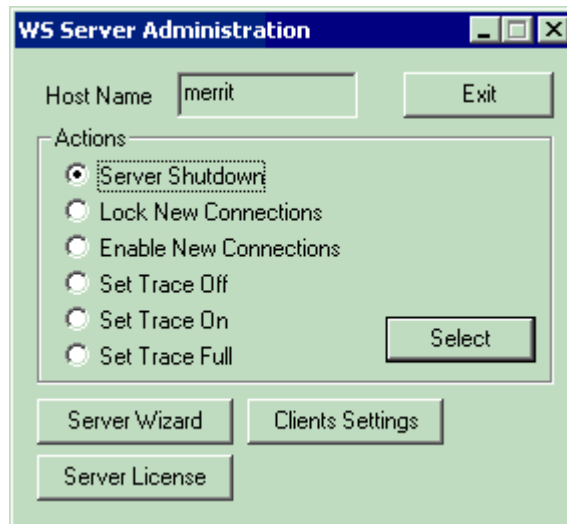
The possible actions are :

- Shutdown the server
- Lock / Enable new connections
- Set the trace level
- Input the server license
- Manage the Server Connection Wizard
- Modify the Client Connection Settings



## 7.2 Server shutdown

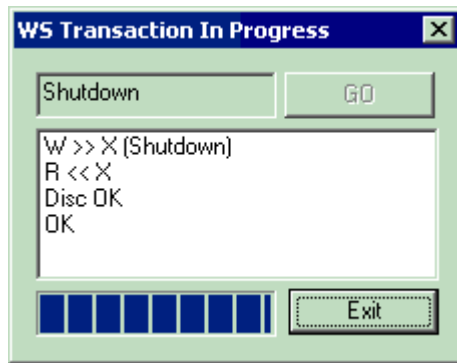
To stop the server process, select the "Server shutdown" radio button, then click on the "Select" button.



Confirm or cancel the action in the server with this dialog box.

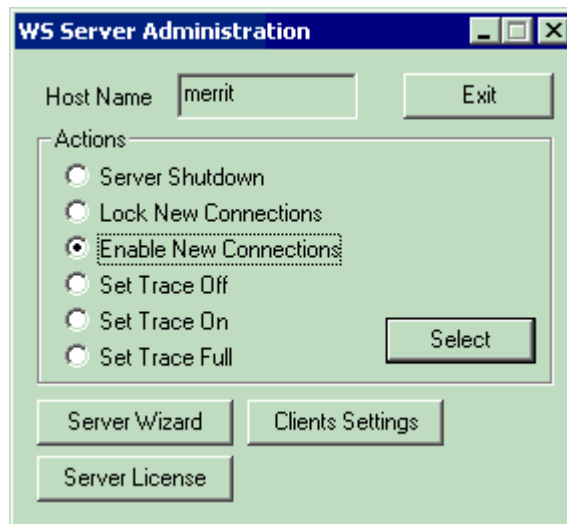
The connection with the server is lost with shutdown.

The shutdown process should take some time if there are any active connections.



### 7.3 New connections

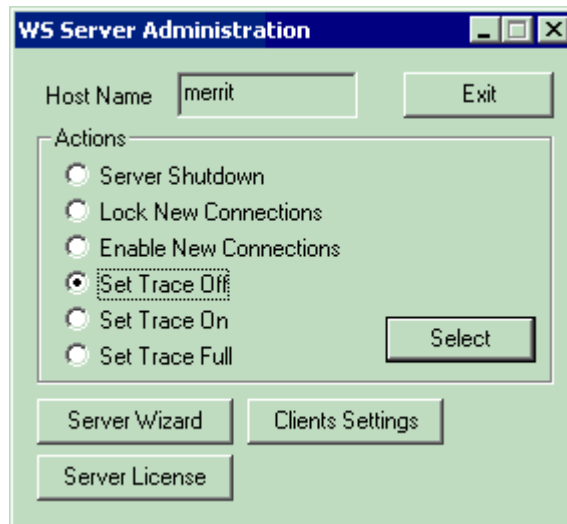
You may forbid any new connection to the server by selecting the "Lock New Connections" option. Or enable them (default) by selecting the "Enable New Connections" option. Then click on the "Select" button. Confirm or cancel the transaction.



### 7.4 Trace Level

You may manage the amount of information sent to the log files with the trace options.

Select the desired option, then click on the "Select" button. Confirm or cancel the transaction.



## 7.5 License

When installed, WireLess studio allows a single-user license for evaluation purposes.

You may order licenses for multiple users at [info@softogo.com](mailto:info@softogo.com).

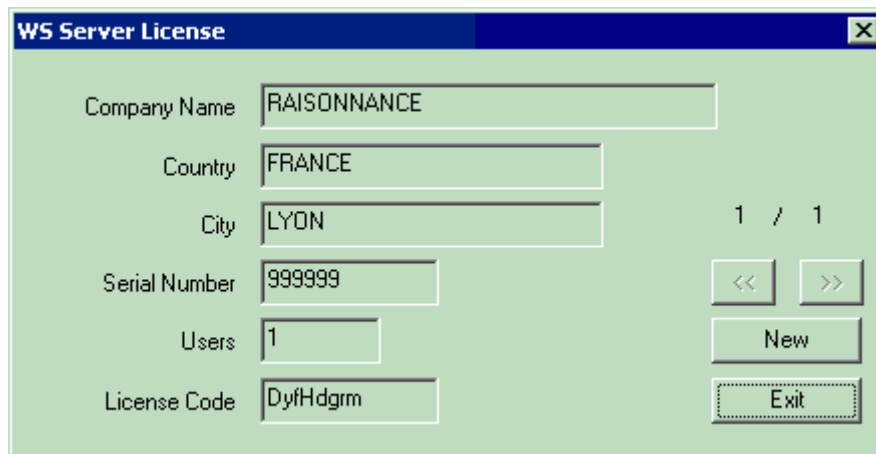
Make sure you provide the company name, country, city and number of users.

You will receive the license code.

You will browse the licenses with the [ << ] and [ >> ] buttons.

Click on the "New" button to add new licenses.

Input in this form the given data and the license code, then click on the "OK" button to validate the new license.



The screenshot shows a dialog box titled "New WS Server License". It has a blue title bar with a close button (X). The dialog is light green and contains several input fields:
 

- Company Name: RAISONNANCE
- Country: FRANCE
- City: LYON
- Serial Number: 999999
- Users: 1
- License Code: Dyfhdgrm

 On the right side, there are two buttons: "Cancel" and "OK".

## 7.6 Server Connection Wizard

The Server Connection Wizard allows the clients to find the WireLess Studio Servers across the network, without knowing their IP addresses. (See Network Configuration / [7 Server Connection Wizard](#)).

To enable this task check the "Enable task" box.

The Connection Wizard ID is the identifier that allows to differentiate or group the servers by the Client. The value "*(hostname)*" sends the host computer name to the client. Otherwise the ID shown here is sent.

The client will search an ID or "all IDs" ("?").

- If **only one** server is found, the Client connects automatically to this server.
- If some servers **with different identifiers** are found, a menu is displayed to the user.
- If some servers **with the same identifier** are found, the Client connects automatically to the server that has the less number of connections running (connection balancing).

The screenshot shows a dialog box titled "WS Server Connection Wizard". It has a blue title bar with a close button (X). The dialog is light green and contains:
 

- A section labeled "Server Wizard Listener" with a checkbox labeled "Enable Task" which is checked.
- A section labeled "Connection Wizard ID" with a text box containing "(hostname)". Below the text box is the text: "(hostname) = Local Host Name Or ID that matches the Client ID".
- At the bottom, the text "Needs to restart the server to use the new values" is displayed.
- Two buttons: "OK" and "Cancel".



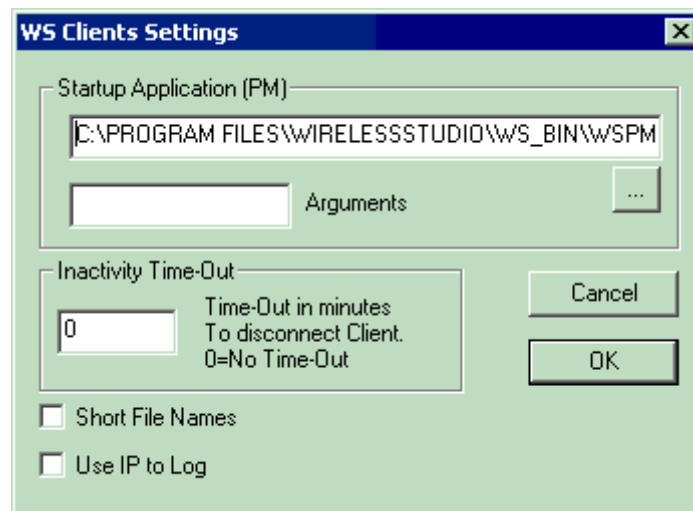
## 7.7 Client configuration

This dialog box allows to configure some client connection parameters.

The **Startup application (PM)** (Program Manager) frame allows to manage the profile and password menu application. You will replace this startup application by another.

The **Inactivity time-out** frame (in minutes) allows to automatically disconnect the client if no RF transaction is detected in this time. 0 means "no time-out".

The "**Short File Names**" check box allows to configure the file naming mode used by WireLess Studio, Long or short (8.3) form.



# • WireLess Studio Desktop Server

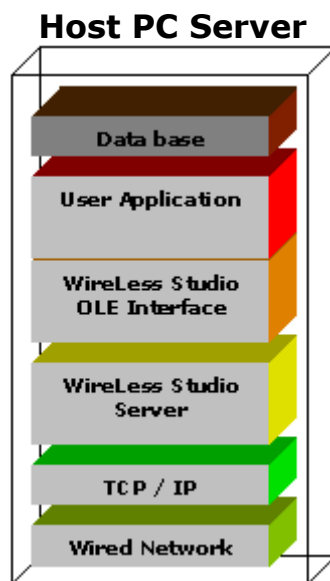
## 1 Description

The server accepts the connections from clients, launches and runs the PC applications.

This server (WSServer) needs a user logged on the PC and may be started/stopped from the desktop.

The PC that runs WSServer must have the TCP/IP protocol loaded. See the Administrator's Guide / [Network Configuration](#) / [Server](#).

To install just WSServer in a PC, see the Administrator Guide / [Installing from CD](#) / [Desktop Server](#).



## 2 Starting

To launch the program, click on the desktop WSServer icon:



Or launch it through "Start Menu / Programs / WireLess Studio / WireLess Studio Server"

## 3 Shutdown

To shutdown the server, connect to the server with the Administrator, select the "Server Administration" and the Server shutdown option. (See Administrator's Guide / [WireLess Studio Administrator](#), [Starting](#), [Connecting](#), [Server Administration](#) and [Server shutdown](#) ).

## 4 Administration

The server has no user interface.

The server administration is made via the WireLess Studio Administrator through a TCP/IP connection, either from the same computer that runs the server or from another computer connected to the network.

The WireLess Studio Administrator (WSAdm), allows to manage:

- The client network connections
- The profiles and application programs
- The server (shutdown, connections and trace)

The server launches the WireLess Studio Program Manager (WSPm) that uses the profile list (created by the Server and the Administrator, see [Program Administration](#)).

The Program Manager allows the user sign-on and application selection, then launches the selected user application.

## 5 Configuring

The WireLess Studio Server has a configuration file "WSServer.ini" that is created with the default parameters at first start-up.

If you want to customize a parameter, start the server once to create the ".ini" file, then shut it down, modify some parameters and restart again.

### 5.1 The WSServer.ini File

This file contains some sections that have the configuration options. You may edit this file by Windows Notepad utility.

#### 5.1.1 Trace section

This section groups the options of the trace (or "log") files.

##### **[TRACE]**

Is the section name.

**Dir**=D:\Program Files\WireLessStudio\WS\_Bin\WSLog

Is the absolute root path for trace files. This name is completed with the date (YYMMDD) to create a daily folder which contains the logs of the day.

**Days**=3

Is the top number of daily logs folders that will be stored in the PC. After this number is reached the folders are automatically deleted.

**Name**=WSServer

Is the root of the name of the log file. The name will be completed with the "Task Number" in the WS Server frame (see [Network Topology](#)) for each client that logs on the server, giving a "WSServerXXX.log" file for each client connection. This file contains the actions performed by the client.

**Server**=SRV.log

Is the suffix to complete the name for logs about the actions performed by the server, e.g. startup, client connections, licence limit, etc.

This gives a "WSServerSRV.log" file by default.

**Adm**=ADM.log

Is the suffix to complete the name for logs about the actions performed by the administrator in the server, e.g. administrator connections, profile creations, shutdown, etc.

This gives a "WSServerADM.log" file by default.

**Level**=10

Is the default "log level". The 0 value gives the least information log. The 99 value gives the most detailed information. This value may be dynamically modified by the administrator (see [Trace Level](#)).

Level 10 allows main actions and fatal errors to be logged.

Level 50 allows warnings to be logged.

Level 99 allows full trace of all events. This option should dramatically slow the server performance and generate large log files. Do not use this level in normal working mode.

### 5.1.2 IP Section

This section groups the options about server IP connection.

#### [IP]

Is the section name.

**Adress**=0.0.0.0

Is the interface IP address. The 0.0.0.0 address means "all interfaces". If you have a "multi-homed" host (Host computer that has more than one IP interface connected to several networks) you may restrict the WSServer functions to only one interface. Input the IP address of this interface.

**Port**=2001

Is the "listen" port of WireLess Studio server. If this default port is in conflict with other applications in the same PC (see [Network Configuration / Addresses](#)) modify this value to another IP port.

**Tmout**=5

Is the top time-out in seconds when sending or receiving data to/from the IP clients before connection fails. If you have a slow network access (with loss of connections) you should increase this time-out.

### 5.1.3 APP section

This section groups the options about the initial application launched by the server when a client connection occurs.

#### **[APP]**

Is the section name.

**Name**=D:\PROGRA~1\WIRELE~1\WS\_Bin\WSPM.EXE

Is the full qualified path and file name of the initial application. Normally WSPm.exe.

**Args**=

Are the arguments passed to the application in the command line. Empty by default.

#### **5.1.4 License section**

This section groups the values entered by the administrator to store the license code. For security reasons, it is recommended not to modify these values directly through a ".ini" file edition.

#### **[LICENCE]**

**Licence**=Dyfhdgrm

**Company**=RAISONNANCE

**Country**=FRANCE

**City**=LYON

**Serial**=999999

**Users**=1

#### **5.1.5 Clients section**

This section groups the client parameters.

#### **[CLIENTS]**

Is the section name.

**InactMinutTmout**=60

Inactivity timeout. If the client does not perform any RF command in this time, the terminal is disconnected, the session is closed, and a disconnect error reaches the PC application (the application will terminate the program).

**ShortNames**=0

If set, convert program file names to short form (8.3).

**ArpStatic**=0

If set, create a static ARP entry in the local cache (IP - MAC address association) for the connected terminal.

This feature will be needed when a radio terminal does not respond to unsolicited ARP requests. The static entries prevent ARP requests and reduce network traffic.

Static ARP entries are deleted when the session ends.

### 5.1.6 Wizard section

This section groups the parameters for the Server Connection Wizard feature.

#### **[WIZARD]**

Is the section name.

#### **Enable=1**

0=Disables the Server Connection Wizard. 1=Enables the Server Connection Wizard.

#### **Id=(hostname)**

Is the host Identifier for the Wizard process.

(hostname)=means that the Id supplied is the computer's hostname.

### 5.1.7 Window section

This section allows to display a user interface window in the desktop while the server is running. This section is only for development purposes to allow to shutdown the server (through the exit button) without administrator connection.

This section must be the last section in the file.

#### **[WINDOW]**

Is the section name.

#### **Visible=0**

0 means not visible (normal work). 1 means visible (development work).

## 6 Log files

There are three categories of log files :

- The server log, ("WSServerSRV.log" file by default) that keeps trace of the server main activity.
- The clients log, ("WSServerXXX.log" file by default, where XXX is the task number - or the IP address - that you can get from the WS Server frame in the [Network Topology](#) option of the Administrator program) that keeps trace of the logged client activity in the server.
- The administrator log, ("WSServerADM.log" file by default) that keeps trace of the administrator activity.

You may see this files with the Windows Notepad utility.

You may manage the amount of information logged by modifying the "Trace Level" (see [Trace Section](#), Level).

You may change the default log files' name (see [Trace Section](#), Name, Adm and Server).

The destination folder of those files may be changed from default (the folder of the server exe file) (see [Trace Section](#), Dir).

The folders are created in a daily basis. Each folder name contains the date. You may change the root folder name (see [Trace Section](#), Dir).

Old folders will be automatically deleted. You may modify the number of folders that will be stored by the server (see [Trace Section](#), Days).

# • WireLess Studio Service Server

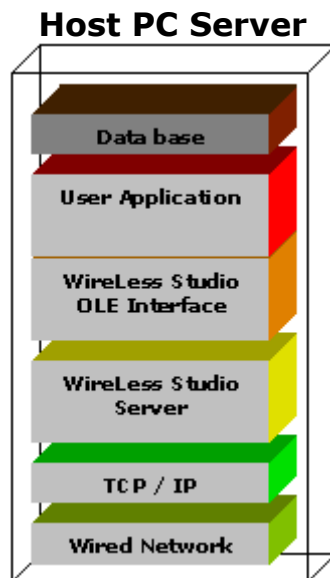
## 1 Description

The server accepts the connections from clients, launches and runs the PC applications.

This server (WSServerSvc) is a NT Service, doesn't need a user logged on the PC, and may be started automatically, and managed from the "Services" control panel.

The PC that runs WSServerSvc must have the TCP/IP protocol loaded. See the Administrator's Guide / [Network Configuration](#) / [Server](#).

To install just WSServerSvc in a PC, see the Administrator Guide / [Installation CD](#) / [Service Server](#).

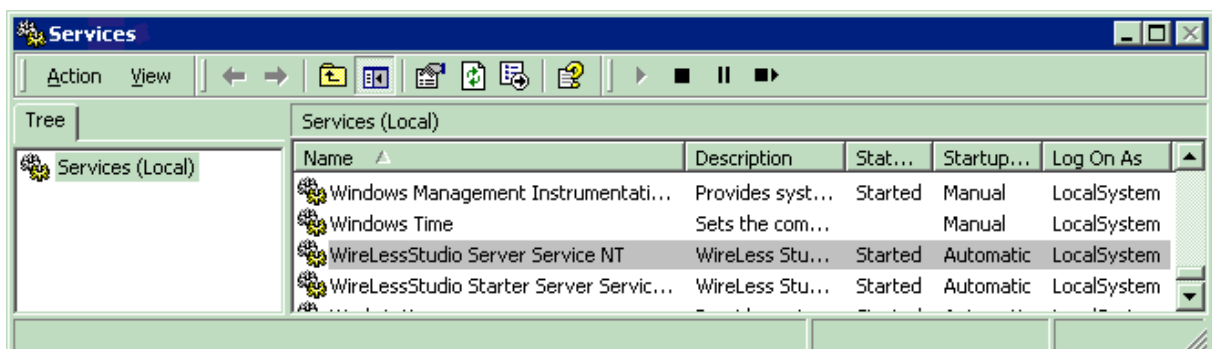


## 2 Starting

The service will run automatically when the computer starts.

With the WNT or W2000 Services Control Panel you may manage the startup mode (Manual / Automatic) and the start/stop of the service.

By default the service is installed in Automatic mode.





## 3 Shutdown

To shutdown the server you should connect to the server with the Administrator, select "Server Administration" and the Server shutdown option. (See Administrator's Guide / [WireLess Studio Administrator, Starting, Connecting, Server Administration](#) and [Server shutdown](#) ).

Also you may stop the service through the WNT or W2000 Services Control Panel.

## 4 Administration

The server has no user interface.

The server administration is made via the WireLess Studio Administrator through a TCP/IP connection, either from the same computer that runs the server or from another computer connected to the network.

The WireLess Studio Administrator (WSAdm) allows to manage :

- The client network connections
- The profiles and application programs
- The server (shutdown, connections and trace)

The server launches the WireLess Studio Program Manager (WSPm) that uses the profile list (created by the Server and the Administrator, see [Program Administration](#)).

The Program Manager allows the user sign-on and application selection, and then launches the selected user application.

## 5 Configuring

The WireLess Studio Server has a configuration file "WSServer.ini" that is created with the default parameters at the first start-up.

If you want to customize a parameter, start the server once to create the ".ini" file, then shut it down, modify some parameters and restart again.

### 5.1 The WSServer.ini File

This file contains some sections that have the configuration options. You may edit this file by the Windows Notepad utility.

#### 5.1.1 Trace section

This section groups the options of the trace (or "log") files.

## **[TRACE]**

Is the section name.

**Dir**=D:\Program Files\WireLessStudio\WS\_Bin\WSLog

Is the absolute root path for trace files. This name is completed with the date (YYMMDD) to create a daily folder which contains the logs of the day.

**Days**=3

Is the top number of daily logs folders that will be stored in the PC. After this number is reached the folders are automatically deleted.

**Name**=WSServer

Is the root part of the name of the log file. The name will be completed by the "Task Number" in the WS Server frame (see [Network Topology](#)) for each client that logs on the server, giving a "WSServerXXX.log" file for each client connection. This file contains the actions performed by the client.

**Server**=SRV.log

Is the suffix to complete the root name for logs about the actions performed by the server, e.g. startup, client connections, license limit, etc.

This gives a "WSServerSRV.log" file by default.

**Adm**=ADM.log

Is the suffix to complete the root name for logs about the actions performed by the administrator in the server, e.g. administrator connections, profile creations, shutdown, etc.

This gives a "WSServerADM.log" file by default.

**Level**=10

Is the default "log level". The 0 value gives the least information log. The 99 value gives the most detailed information. This value will be dynamically modified by the administrator (see [Trace Level](#)).

Level 10 allows main actions and fatal errors to be logged.

Level 50 allows warnings to be logged.

Level 99 allows full trace of all events. This option should dramatically slow the server performance and generate large log files. Do not use this level in normal working mode.

### **5.1.2 IP Section**

This section groups the options about server IP connection.

## **[IP]**

Is the section name.

**Address**=0.0.0.0

Is the interface IP address. The 0.0.0.0 address means "all interfaces". If you have a "multi-homed" host (Host computer that has more than one IP interface connected to several networks) you may restrict the WSServer functions to only one interface. Input the IP address of this interface.

**Port**=2001

Is the "listen" port of WireLess Studio Server. If this default port is in conflict with other applications in the same PC (see [Network Configuration / Addresses](#)) modify this value to another IP port.

**Tmout=5**

Is the top time-out in seconds when sending or receiving data to/from the IP clients before connection fails. If you have a slow network access (with loss of connections) you should increase this time-out.

### 5.1.3 APP section

This section groups the options about the initial application launched by the server when a client connection occurs.

#### [APP]

Is the section name.

**Name=D:\PROGRA~1\WIRELE~1\WS\_Bin\WSPM.EXE**

Is the full qualified path and file name of the initial application. Normally WSPm.exe.

**Args=**

Are the arguments passed to the application in the command line. Empty by default.

### 5.1.4 License section

This section groups the values entered by the administrator to store the license code. For security reasons, it is recommended not to modify these values directly through a ".ini" file edition.

#### [LICENCE]

**Licence=Dyfhdgrm**

**Company=RAISONNANCE**

**Country=FRANCE**

**City=LYON**

**Serial=999999**

**Users=1**

### 5.1.5 Clients section

This section groups the client parameters.

#### [CLIENTS]

Is the section name.

**InactMinutTmout=60**

Inactivity timeout. If the client does not perform any RF command in this time, the terminal is disconnected, the session is closed, and a disconnect error reaches the PC application (the application will terminate the program).

**ShortNames=0**

If set, convert program file names to short form (8.3).

### 5.1.6 Wizard section

This section groups the parameters for the Server Connection Wizard feature.

#### **[WIZARD]**

Is the section name.

**Enable=1**

0=Disables the Server Connection Wizard. 1=Enables the Server Connection Wizard.

**Id=(hostname)**

Is the host Identifier for the Wizard process.

(hostname)=means that the Id supplied is the computer's hostname.

### 5.1.7 Window section

This section allows to display a user interface window in the desktop while the server is running. This section is only for development purposes to allow to shutdown the server (through the exit button) without administrator connection.

*Normally, services will not interact with the desktop and will not display any window. Check the desktop interaction in the service properties.*

This section must be the last section in the file.

#### **[WINDOW]**

Is the section name.

**Visible=0**

0 means not visible (normal work). 1 means visible (development work).

*This value will normally be 0 for a Service.*

## 6 Log files

There are three categories of log files:

- The server log, ("WSServerSRV.log" file by default) that keeps trace of the server main activity.
- The clients log, ("WSServerXXX.log" file by default, where XXX is the task number - or the IP address - that you can get from the WS Server frame in the [Network Topology](#) option of the Administrator program) that keeps trace of the logged client activity in the server.
- The administrator log, ("WSServerADM.log" file by default) that keeps trace of the administrator activity.

You may see this files with the Windows Notepad utility.

You may manage the amount of the information by modifying the "Trace Level" (see [Trace Section](#), Level).

You may change the default log files' name (see [Trace Section](#), Name, Adm and Server).

The destination folder of those files may be changed from default (the folder of the server exe file) (see [Trace Section](#), Dir).

The folders are created in a daily basis. Each folder name contains the date. You may change the root folder name (see [Trace Section](#), Dir).

Old folders will be automatically deleted. You may modify the number of folders that will be stored by the server (see [Trace Section](#), Days).