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# Tintoretto Wave

# User Manual



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## [INTRODUCTION](#)

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### Overview

Tintoretto Wave is a multifunction device which will allow you:

- Shared Internet access via an xDSL or Cable modem.  
If the LAN already uses a NAT router for Internet Access, the Wireless users will be able to share the same device.
- Wireless LAN Access Point (base station) for equipment compliant with the IEEE802.11b (DSSS) specifications.
- Network Printer ? LAN users can share the printer attached to Tintoretto Wave

Tintoretto Wave provides a low-cost method of giving users of your network access to the vast resources available on the Internet. Once Tintoretto Wave is installed and configured, the Internet is just a click away.

Tintoretto Wave is able to use your existing xDSL/ADSL/Cable modem link to connect to your ISP (Internet Service Provider) using your Single User Account

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### Features

Tintoretto Wave incorporates many advanced features, carefully designed to provide sophisticated functions while being easy to use.

#### LAN Features

- **10/100 BaseT Support**  
The LAN connection will auto-detect 10BaseT and 100BaseT connections.
- **DHCP Server Support.**  
A DHCP (**D**ynamic **H**ost **C**onfiguration **P**rotocol) Server provides a dynamic IP address to PCs and other LAN devices upon request.  
Tintoretto Wave can act as a **DHCP Server**.
- **Multi Segment LAN Support.**  
If you have a Router, PCs on other LAN segments can use Tintoretto Wave to access the Internet. A static routing table is provided to support multiple routers if needed.

#### WAN Features

- **10BaseT Wan port**

This port is for connecting the external xDSL or Cable modem (must provide Ethernet connection).

- **PPPoE Support.**

Connect to your ISP using PPPoE (PPP over Ethernet), if your ISP uses this method.

- **Direct Connection to ISP**

Connect to your ISP by using Direct connection method if required.

## Wireless Features

- **Standards Compliant.**

Tintoretto Wave complies with the IEEE802.11b (DSSS) specifications for Wireless LANs and is WI-FI interoperable.

- **Security Features.**

Support for WEP (Wired Equivalent Privacy) and Access Control is included.

- **Simple Configuration.**

If the default settings are unsuitable, they can be changed quickly and easily.

## Internet Access Features

- **Shared Internet Account.**

All users on the LAN (max 253) can share the same Single User Internet Account.

- **Internet Access** can be achieved through the external xDSL or Cable modem or through an existing LAN NAT router

## Advanced Internet Features

- **Virtual Servers.** This feature allows Internet users to access Internet servers on your LAN. The required setup is quick and easy.

- **User-Defined Virtual Servers.** Internet users can access non-standard Internet Servers on your LAN by using this feature.

- **Special Internet Applications.** Internet applications such as Internet Videoconferencing\*, Telephony, Games Servers, and other special-purpose Servers are supported.

- **Exposed Computer.** One (1) PC on your local LAN can be exposed to the Internet. This allows unrestricted 2-way communication between this PC and servers or users on the Internet.

\*Netmeeting may not be supported. For more details see infos on Online Help at [www.digicom.it](http://www.digicom.it).

## Configuration & Management

- **Easy Setup.**

Connect to Tintoretto Wave with your WEB browser from anywhere on the LAN for configuration.

- **Remote Management.**

Tintoretto Wave can be managed from a workstation anywhere on the LAN, using a WEB browser.

## Security Features

- **Configuration Data.**

Optional password protection is provided to prevent unauthorized users from modifying the configuration.

- **Access List**

The LAN Administrator can limit Internet and E-Mail access by individual workstations.

- **Packet Filtering.**

All incoming data packets are monitored and all incoming server requests are filtered, thus protecting your network from malicious attacks from external sources.

## LAN Data Protection

All users on the LAN share a single external IP address. From the external viewpoint, there is no network, only a single device.

For external requests, any attempt to connect to local resources are blocked. The router will not "reverse translate" from a global IP address to a local IP address.



## Device Details

- [Package Contents](#)
- [Physical Details](#)
- [Specifications](#)

### Package Contents

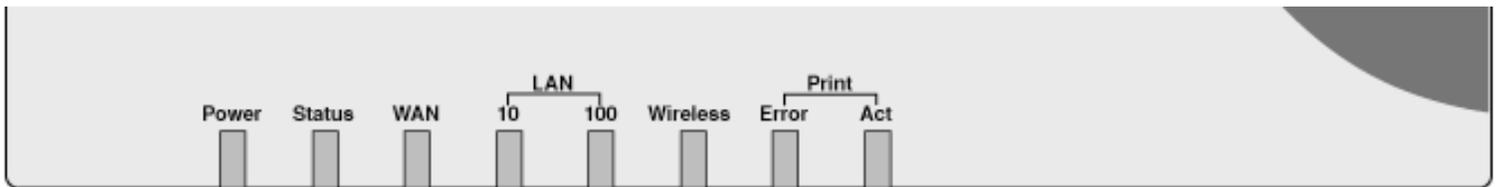
The following items should be included:

- Tintoretto Wave
- Wireless PC Card (for Tintoretto Wave)
- Power Adapter
- 2 Cables
- CD-ROM containing this Manual

If any of the above items are damaged or missing, please contact your dealer as soon as possible.

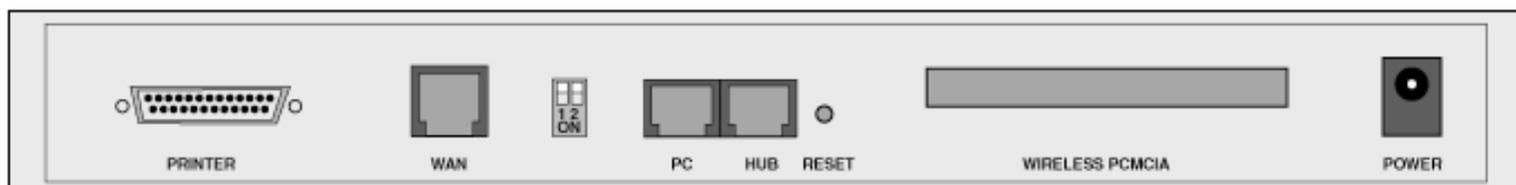
### Physical Details

#### LED Table



<b>Power</b>	<b>On</b> - power on <b>Off</b> - no power
<b>Status</b>	<b>On</b> - Error condition. <b>Off</b> - Normal operation <b>Blinking</b> - This LED blinks during start up.
<b>WAN</b>	<b>On</b> - WAN connection is established. <b>Flashing</b> - data is being transmitted or received via the WAN port.
<b>LAN 10 or 100</b>	<b>On</b> - LAN connection is using 10BaseT or 100BaseTX. <b>Off</b> - No LAN connection. <b>Flashing</b> - data is being transmitted or received via the LAN port
<b>Wireless</b>	<b>On</b> - Wireless connection available; Wireless Access Point is ready for use. <b>Off</b> - No Wireless connection available. <b>Flashing</b> - Data is transmitted or received via the Wireless access point. This includes "network traffic" as well as user data.

<b>Print Act</b>	<b>On</b> - Connection to printer established. <b>Off</b> - No connection to printer; printer is Off or Off-line. <b>Flashing</b> - Data is being transmitted to the printer.
<b>Print Error</b>	<b>On</b> - Printer error detected. <b>Off</b> - No printer error detected.



## Connectors and Components

Item	Description
<b>Printer</b>	Standard parallel printer port for sharing a printer.
<b>WAN</b>	Port for connecting the ADSL or Cable Modem here. If the modem came with a cable, use the supplied cable. Otherwise, use a standard LAN cable.
<b>PC</b>	Port for connecting directly to your PC (no Hub) using a standard LAN cable (RJ45 connectors).
<b>HUB</b>	Port for connecting to a 10BaseT or 100BaseTX hub, using a standard LAN cable (RJ45 connectors) <b>Use EITHER the PC port OR the Hub port. You can NOT use both.</b>
<b>Reset button</b>	<p>Use this to reset (reboot) Tintoretto Wave.</p> <p>This button can also be used to clear ALL data and restore ALL settings to the factory default values.</p> <p>To restore the factory default values:</p> <ol style="list-style-type: none"> <li>1. Power Off</li> <li>2. Hold the Reset Button down while you Power On.</li> <li>3. Keep holding the Reset Button for a few seconds, until the RED LED has flashed TWICE.</li> <li>4. Release the Reset Button.</li> </ol>
<b>WAN</b>	<p>Insert the supplied Wireless PCMCIA card into this slot.</p> <p><b>Ensure the power is OFF before inserting or removing the PCMCIA Card.</b></p> <p><b>Do not use any other PCMCIA Card than the supplied one.</b></p>
<b>DC12V</b>	Connect the supplied power DC 12V supply unit here. Do NOT use other power supplies.
<b>DIP</b>	See the following DIP switch table for details.

## DIP Switch Table

SW1	SW2	Description
OFF	OFF	Normal operation (default) DHCP Server enabled.
OFF	ON	Normal operation. DHCP Server disabled.
ON	OFF	Restore device IP and password (see below)
ON	ON	Normal Operation

## Restore Device IP Address and Password

If the IP address or password is lost, use the following procedure to:

- Restore the device IP address to the factory default of 192.168.0.1
- Set the Network Mask to 255.255.255.0
- Set the password to NULL (no password)

### Procedure

1. Power off the device.
2. Set DIP switch 1 ON, and switch 2 OFF.
3. Power on the device.

Operate DIP switch 1 in the following sequence (you have 15 seconds to complete the sequence):

- OFF
- ON
- OFF

If everything is OK, the *Status LED* should flash once after about 5 seconds.  
Tintoretto Wave is now ready for use with the default IP Address and password.

## Specifications

Dimensions (mm)	240 * 120 * 35
Operating Temperature	0° C to 40° C
Storage Temperature	-10° C to 70° C
Network Protocol:	TCP/IP
LAN Fast/ Ethernet Interface:	2 * 10/100BaseT (RJ45) in alternative
WAN Ethernet Interface:	1 * 10BaseT (RJ45)
PCMCIA slot	Access Point via PCMCIA card Standard IEEE 802.11b, WEP and Roaming support. WI-FI compatible.
Printer interface	1 * standard parallel port over DB25 connector
LEDs	8
External Power Adapter	12 V DC



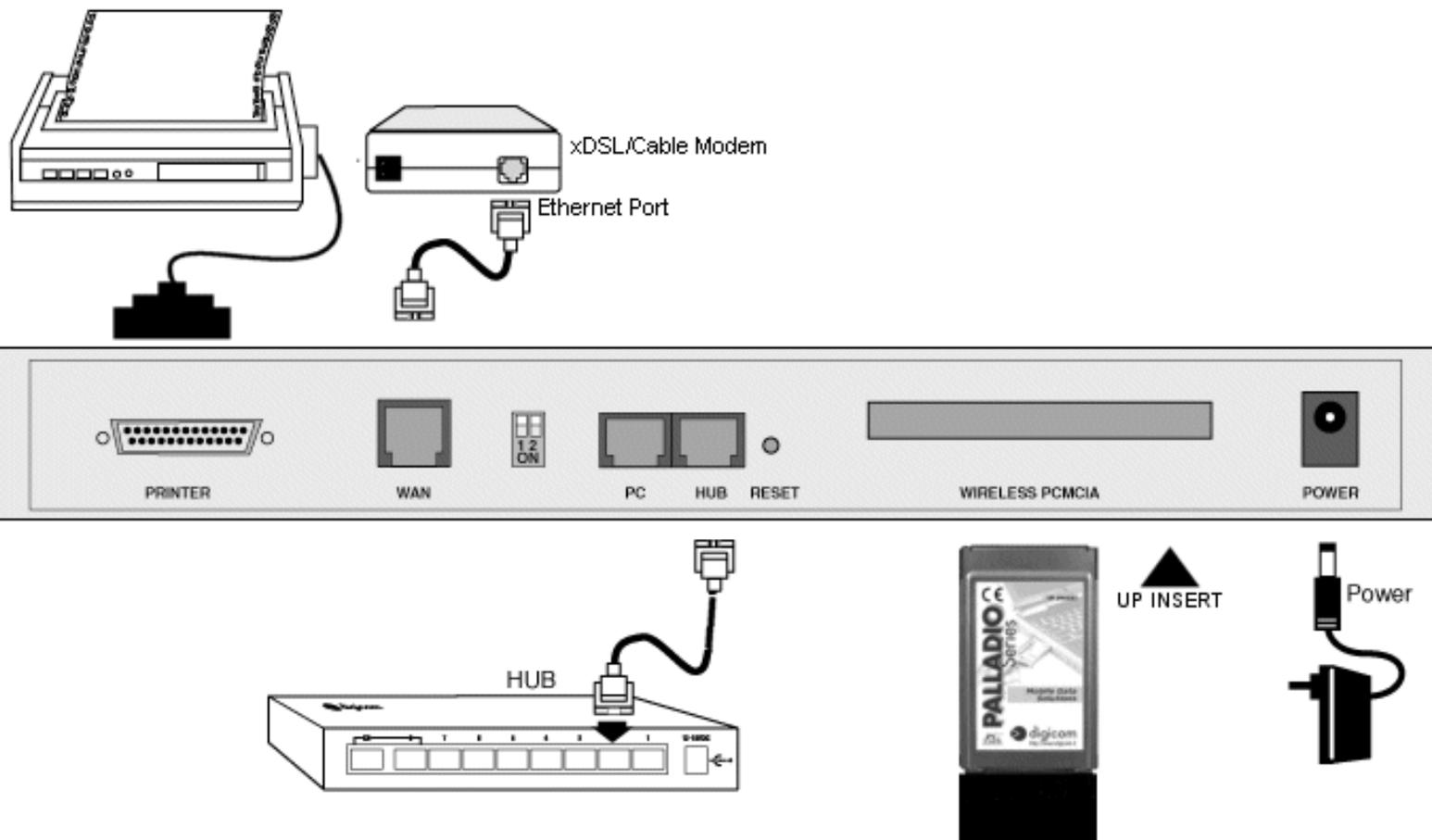
## LAN Installation

- [Requirements](#)
- [Procedure](#)

### Requirements

- 802.11b wireless, 10BaseT or 100BaseTX based network, UTP cabling.
- Network card's software drivers installed on all computers.
- TCP/IP protocol installed on the computers.
- xDSL or Cable modem providing a 10BaseT Ethernet port.
- Single User Internet account with an ISP.

### Procedure



### 1. Choose an Installation Site

Select a suitable location which is close to:

- xDSL or Cable modem (if used).
- Power outlets.
- 10BaseT or 100BaseTX hub.
- Printer (if used)

For best performance it is recommended to install Tintoretto Wave vertically on a wall, at approx. 2m from the ground.

### 3. Insert Wireless PC Card in the slot

- **Power off the device**
- Insert the supplied PC Card into the slot. Please pay attention to the "UP insert" indication.
- Push the card gently into the slot until it will completely block

### 3. Connect the device to LAN

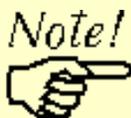
- Use standard UTP network cable, with RJ45 connectors, to connect Tintoretto Wave to a 10BaseT or 100BaseTX hub. Tintoretto Wave will auto-detect the network speed and full/half duplex mode.
- If your LAN has an existing DHCP Server, set DIP switch 2 ON to disable the DHCP Server in Tintoretto Wave.

### 3. Connect to xDSL or Cable modem

Using a cable fitted with RJ45 plugs, connect the WAN port on Tintoretto Wave to the Ethernet port on the xDSL or Cable modem.

### 4. Power Up

Connect the supplied power adapter to Tintoretto Wave.



**Only use the provided power adapter. Using a different one may cause hardware damage and warranty void.**

### 5. Check the LEDs

When Tintoretto Wave is powered On, Power, LAN and Wireless should light.

For more information on the LEDs, refer to the LED table in [Device Details](#).



## SETUP

- [Overview](#)
- [Access to configuration](#)
- [LAN](#)
- [Wireless](#)
- [Options](#)
- [WAN](#)

### Overview

This chapter describes the configuration of the LAN, WAN and Wireless sections of the device.

Refer to the [PC/LAN Setup](#) section for configuring the LAN computers

Other interesting sections to be referred to are [DHCP](#), [Routing](#), [NAT](#), [Advanced Internet](#), [Access Control](#).

### Access to Configuration

Configuration access is made by a common browser accessing the following address [192.168.0.1](#) (or the IP address set by the Administrator if the device has been reconfigured).

If needed, refer to the [PC/LAN Setup](#) section for setting up a computer in order to access the configuration.

- Open the browser and type **http://192.168.0.1** (or the address given by the Administrator)
- If a password was set for securing the configuration access then the following windows (or compatible) will appear:

A screenshot of a Windows-style dialog box titled 'Enter Network Password'. The dialog has a blue title bar with a question mark icon and a close button. The main area is light gray and contains the text 'Please enter your authentication information.' followed by 'Resource: NeedPassword'. Below this are two input fields: 'User name:' and 'Password:'. The 'User name' field is empty, and the 'Password' field contains several asterisks. To the right of the input fields are two buttons: 'OK' and 'Cancel'.

- Leave the User name tab blank

- Type in the password and click OK

The LAN window will appear

## LAN

<b>LAN</b>	 The default settings should suit most situations. Using the DHCP Server function to automatically assign IP Addresses is recommended.
<b>TCP/IP</b>	IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="1"/> Network Mask: <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
<b>DHCP Server</b>	Operation <input checked="" type="radio"/> Enable <input type="radio"/> Disable Start IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="2"/> Finish IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="51"/>
<b>DNS</b>	DNS (Domain Name Server) is required only when using a "Fixed IP Address" on the WAN Port. DNS (1) : <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> DNS (2) : <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> (Optional) DNS (3) : <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> (Optional)
<b><a href="#">Routing Table</a></b>	Use this link to reach the Routing Table. The Routing Table is only required if your LAN has 1 or more Routers.
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

## LAN

<p><b>IP Address</b></p> <p><b>Network Mask</b></p>	<p>IP address for Tintoretto Wave. Use the default value of 192.168.0.1 unless the address is already in use or your LAN is using a different IP address range. In the latter case, enter an unused IP Address from within the range used by your LAN.</p> <p>The default Network Mask value 255.255.255.0 is standard for small (class "C") networks. For other networks, use the Network Mask for the LAN segment to which Tintoretto Wave is attached. i.e. the same value as the PCs on that LAN segment.</p> <p><b>Use of the DHCP server (recommended):</b> No special change is needed for using the DHCP service. All stations on the LAN must be set for using the DHCP server and receiving IP addresses and Network Masks.</p> <p><b>If there is already a DHCP server in your LAN:</b> Set Dip switch 2 ON for disabling the internal DHCP server. Set an unused IP address for Tintoretto Wave (not in the range used by the DHCP server). Network Mask must be the same as used on the LAN stations.</p> <p><b>If the LAN is using fixed (manually set) IP addresses:</b> Set an unused IP address for Tintoretto Wave. Network Mask must be the same as used on the LAN stations.</p>
<p><b>DHCP Server</b></p>	<p>If Enabled (default), Tintoretto Wave will allocate IP Addresses to PCs on your LAN.</p> <p>If you are already using a DHCP Server, this setting must be DISABLED, and the existing DHCP server must be reconfigured. See <a href="#">DHCP</a> for further details.</p>
<p><b>DNS IP Address</b></p>	<p>If your ISP uses a "Dynamic IP Address", then the DNS is also provided dynamically. Any DNS values entered here will be used instead of the dynamically obtained DNS addresses.</p> <p>If using a "Fixed IP Address", your ISP should recommend a DNS.</p> <p>Multiple DNS entries should be entered in the order you want them accessed. (The first available DNS will be used.)</p>
<p><b>Routing Table</b></p>	<p>Routing table management.</p> <p>If other routers are located on the same LAN then it is possible to interoperate with them.</p> <p>If there is a router on the LAN connecting to the Internet you can simply add it's address into Tintoretto Wave's routing table in order to allow all clients to share the same Internet access.</p> <ul style="list-style-type: none"> <li>● Access the configuration</li> <li>● Select the LAN window</li> <li>● Type <b>0.0.0.0</b> for <i>Destination Address</i></li> <li>● Type <b>0.0.0.0</b> for <i>Network Mask</i></li> <li>● Type the router's IP address (e.g. 192.168.0.110) for the <i>Gateway IP Address</i></li> <li>● Select <b>LAN</b> for <i>Interface</i></li> <li>● Select <b>1</b> for <i>Metric</i>.</li> <li>● Click on <b>Add</b>.</li> </ul> <p>Disable NAT in <a href="#">Options</a></p> <p>For further detail see <a href="#">Routing</a> section</p>

Click **Save** for activating the changes you made.

## Wireless

### Wireless



Generally, all Wireless Devices must use the same settings. Refer to the on-line help or user manual for details.

### Configuration

Regulatory Domain: **Most of Europe/Australia**  
 Station Name: **SC422376**  
 SSID (Service Set Identifier)   
 Channel No:

### WEP Data Privacy

Off - no data encryption

64 Bit Encryption using this key table

Default Key

Key 1:	A2	56	1D	DD	0A
Key 2:	00	00	00	00	00
Key 3:	00	00	00	00	00
Key 4:	00	00	00	00	00

128 Bit Encryption using this key

00	00	00	00	00	00	00
00	00	00	00	00	00	

### Wireless Station Access

Enable Wireless Access Point

Wireless Stations:

Delete

New Station Address:

Add

#### Access Permission

For Wireless Stations listed above:  Allow Internet access  
 Allow LAN access

For Other Wireless Stations:  Allow Internet access

Save | Cancel

**Configuration**

<b>Regulatory Domain</b>	Countries where the use of this device is allowed. It is illegal to use this device in any location outside of the regulatory domain.
<b>Station name</b>	This is the same as the Device (Host) Name on the WAN screen. On your PC, some Wireless status screens may display this name as the Access Point in use.
<b>SSID (ESSID)</b>	Service Set Identifier. Per comunicare con questo dispositivo tutte le stazioni wireless devono utilizzare lo stesso valore per SSID/ESSID (generalmente ANY=qualsiasi). Il valore di fabbrica è <b>default (case sensitive)</b> .
<b>Channel No.</b>	To communicate, all Wireless stations <b>MUST</b> use the same Channel.  The default for the USA and Canada is 3.  Select the value you wish to use on your Wireless LAN. If you experience lost connections and/or slow data transfers you may need to experiment with different channels to see which is the best.

**WEP Data Privacy**

<b>Off</b>	No encryption is used
<b>64 Bit Encryption</b>	<ul style="list-style-type: none"> <li>● If selected, data is encrypted, using the default key, before being transmitted. The receiving station must be set to 64 Bit Encryption, and have the same Key value in the same position in its key table. Otherwise, it will not be able to de-encrypt the data.</li> <li>● Default Key Select the key you wish to be the default. Transmitted data is ALWAYS encrypted using the Default Key; the other Keys are for decryption only.</li> <li>● Key Table <ul style="list-style-type: none"> <li>○ This table is used when Encrypting and Decrypting data. All stations, including this Access Point, always transmit data encrypted using their default key. The key number (1, 2, 3, 4) is also transmitted. The receiving station will use the key number (1, 2, 3, 4) to determine which key value to use for decryption. If the key value does not match the transmitting station, decryption will fail.</li> <li>○ The easiest way to ensure there are no problems is to have every Station, including the Access Point, use the same key table (all entries identical). Then, it does not matter which key is used as the default key.</li> </ul> </li> </ul>

<b>128 Bit Encryption using this key</b>	<ul style="list-style-type: none"> <li>● If selected, data is encrypted using the key before being transmitted. The receiving station must be set to use 128 Bit Encryption, and have the same Key value. Otherwise, it will not be able to decrypt the data.</li> <li>● KeyEnter the key value you wish to use. Other stations must have the same key.</li> </ul>
<b>Wireless Station Access</b>	
<b>Enable Wireless Access Point</b>	<ul style="list-style-type: none"> <li>● If enabled (default), this device can act as a Wireless Access Point.</li> <li>● If not enabled, no Wireless stations can use this device as a Wireless Access Point.</li> </ul>
<b>Existing Stations</b>	<ul style="list-style-type: none"> <li>● This lists the Wireless stations you have entered. If you have not entered any stations, this list will be empty.</li> <li>● To delete an entry, select it, and click the "Delete" button. Multiple entries may be selected by hold down the CTRL key while selecting. (On the Macintosh, use SHIFT instead of CTRL.)</li> </ul>
<b>New station Address</b>	<ul style="list-style-type: none"> <li>● Use this field to add a new station to the list. Just enter its address here, and click the "Add" button.</li> <li>● Use the software supplied with your Wireless unit to determine its address. The address consists of 12 letters (A..F) and digits (0..9) like this example:  10F810A81091  The address may be shown with separators ( : or - ) between each pair of characters.  <b>Do NOT enter</b> the separators ( : or - ) in this field.</li> </ul>
<b>Access Permission</b>	<ul style="list-style-type: none"> <li>● <b>For Wireless Stations listed above</b> This setting determines what type of access is available to Wireless stations whose address has been entered in the "Wireless Stations" list.</li> <li>● <b>For Other Wireless Stations</b> This setting determines what type of access is available to Wireless stations whose address is NOT in the "Wireless Stations" list.</li> <li>● For either category, if neither "Internet" nor "LAN" access is enabled, Wireless stations are unable to use this Access Point.</li> </ul>

Click **Save** for activating the changes you made.

# Options



The password protects the configuration data.

NAT allows LAN users to share an external (Internet) IP address, and also provides "Firewall" protection.

## Password

Setting a password is recommended.

New password

Verify password

## NAT

If using this device for Internet Access, NAT (Network Address Translation) must remain Enabled.

- Enable NAT
- Disable NAT

## TFTP

TFTP (Trivial FTP) is normally not required for firmware upgrades. A Windows utility is available for this purpose.

- Enable Firmware Upgrade using TFTP

## Remote Management

This option allows you to manage this device via the Internet, using your Web Browser. See help for details.

- Enable Remote Management

Port Number:

Current IP Address to connect to this device: 0.0.0.0



## Options

<b>Password</b>	<p>Once a password is entered, it is required in order to change the device configuration. Passwords are case sensitive and can be up to 8 alphanumeric characters (no spaces or punctuation).</p> <p>To create or change the password, enter the required password in both the New Password and Verify Password input fields.</p> <p>Refer to section <a href="#">Hardware</a>, in case of lost password</p>
<b>NAT</b>	<p>NAT allows PCs on your LAN to share a single external (Internet) IP Address. This IP Address is supplied by your ISP. Use the following to determine whether or not you need NAT.</p> <ul style="list-style-type: none"> <li>● For Internet access, NAT must be left On unless all PCs on your LAN have valid external IP Addresses.</li> <li>● If this device is not being used to provide shared Internet access, NAT is not normally required. With NAT disabled, Tintoretto Wave will act as a static router.</li> <li>● If NAT is disabled, the Firewall protection provided by Tintoretto Wave is lost, and the Advanced Internet features (Virtual Servers, Special Applications, and DMZ) are no longer available.</li> </ul> <p>Disable NAT if you are using a router on the LAN for accessing the Internet (see <a href="#">Routing Table</a>).</p>
<b>TFTP</b>	<p><b>Enable Firmware Upgrade using TFTP</b> TFTP (Trivial FTP) can be used to upgrade the firmware in Tintoretto Wave. However, this is not normally required; there is a Windows utility available for this purpose.</p>
<b>Remote management</b>	<p><b>Enable Remote Management</b> Enable to allow management via the Internet. If Disabled, this device will ignore management connection attempts from the WAN port.</p> <p><b>Port number</b> Enter a port number between 1024 and 65535 (8080 is recommended). This port number must be specified when you connect (see below).</p> <p>Note: The default port number for HTTP (Web) connections is port 80, but using port 80 here will prevent the use of a Web "Virtual Server" on your LAN. (See Advanced Internet - <a href="#">Virtual Server</a> ).</p> <p><b>Current WAN Port IP Address</b> You must use this IP Address to connect (see below). This IP Address is allocated by your ISP. But if using a Dynamic IP Address, this value can change each time you connect to your ISP. So it is better if your ISP allocates you a Fixed IP Address.</p> <p>Example of access to the configuration from remote browser:</p> <p>http://10.10.10.10:8080</p> <p>This example assumes that the WAN IP address is 10.10.10.10 and the port number is 8080.</p>

Click **Save** for activating the changes you made.

**WAN**

Select

- [PPPoE](#) (PPP over Ethernet) if you are accessing the Internet with a single user account requiring PPPoE (RFC 2516) protocol or a virtual "call" to be done for connecting to the ISP.
- [Direct Connection](#), if you are accessing the Internet using an account that does not require the use of PPPoE or you are connecting to a remote LAN (see NAT)

Click **Configure**Selecting **WAN Status** you can try a call to the ISP or remote LAN and see the status of the connection.Whether you are using [PPPoE](#) or [Direct Connection](#) the corresponding screens will appear.

<b>WAN PPPoE</b>	 If your ISP uses PPPoE (PPP over Ethernet), they will supply the required data.
<b>Account</b>	Account/User Name <input type="text" value="guest"/> Password <input type="password"/> Verify password <input type="password"/>
<b>IP Address</b>	IP Address provided by ISP: <input checked="" type="radio"/> Dynamic (allocated on connection) <input type="radio"/> Fixed <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
<b>Options</b>	Idle Time-out (minutes) <input type="text" value="15"/> (0 to disable time-out) Connect On Demand: <input type="checkbox"/> Enable If Connect on Demand is disabled, you must use the <i>Connect</i> button on the "Status" screen to establish a connection.
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

<b>WAN PPOE</b>	
<b>Account User Name e Password</b>	User name and password to be used for the Internet account, provided by your ISP.

<b>IP Address provided by ISP</b>	Normally, this is <b>Dynamic</b> ; use this setting if your ISP did not provide an IP Address.  If your ISP did provide an IP Address, select <b>Fixed</b> and enter the value they provided.
<b>Idle Timeout</b>	If a connection is inactive for longer than this time period, it will be terminated. If zero (0), then the connection will never be terminated.
<b>Connect On Demand by ISP</b>	Normally, this should be Enabled.  If disabled, you must use the Connect button on the Status screen to establish a connection.

Click **Save** for activating the changes you made.

<b>WAN Direct Connection</b>	<p> This data is supplied by your ISP. Some ISP's may require you to use a particular Host name, or may need to know the Hardware (MAC) Address.</p>
<b>Device ID</b>	Device (Host) Name: <input type="text" value="SC422376"/> Hardware (MAC) Address: <b>00-c0-02-42-23-77</b>
<b>IP Address</b>	IP Address: <input checked="" type="radio"/> Dynamic IP Address (DHCP Client) <input type="radio"/> Fixed IP Address IP Address: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Network Mask: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Gateway: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
<div style="text-align: right;"> <input type="button" value="Retrieve Defaults"/> <input type="button" value="Save"/> <input type="button" value="Cancel"/> </div>	

<b>WAN Direct Connection</b>	
<b>Device Name</b>	Normally, there is no need to change the default name, but if your ISP requests that you use a particular "Hostname", enter it here. This name will be provided to, and recorded by, the remote DHCP Server.
<b>Hardware MAC Address</b>	Also called Network Adapter Address or Physical Address. Provide this value to your ISP if requested. If you did not provide this value when first connected, there is no need to provide it now.

<b>IP Address</b>	<p>Select this if using a fixed IP Address. If this option is selected, the following data must be entered.</p> <ul style="list-style-type: none"> <li>● <b>IP Address.</b> If connecting to an ISP, this is the address allocated by the ISP. If connecting to another LAN, this must be a valid address on the external LAN.</li> <li>● <b>Network Mask</b> This must be compatible with the IP Address above</li> <li>● <b>Gateway IP Address</b> The address of the router or gateway, either on the external LAN, or supplied by your ISP.</li> </ul>
<b>Retrieve defaults</b>	Get the default Device Name and clear the other items. No changes are made to the configuration until you click the Save button.

Click **Save** for activating the changes you made.

## WAN Status PPPoE

<b>WAN Status PPPoE</b>	 <b>PPPoE Connection Status.</b> Normally, use of the "Connect" and "Disconnect" buttons is not required.
<b>WAN Status</b>	<p>Physical Address: 00-c0-02-42-23-77  IP Address: 0.0.0.0  Network Mask: 0.0.0.0  PPPoE Link Status: OFF</p>
<b>Connection Log</b>	<pre>005:Reset physical connection 004:stop PPP 003:try to hang up 002:timeout 001:wait 100 msec "WAN start... " 000:stop PPP</pre> <p style="text-align: right;"><input type="button" value="Clear log"/></p>
<input type="button" value="Connect"/> <input type="button" value="Disconnect"/> <input type="button" value="Refresh"/>	

## WAN Status PPPoE

<b>Physical Address</b>	Connection attempt has been triggered by the "Connect on Demand" setting.
<b>IP Address</b>	The IP Address of this device, as seen by devices on the <b>WAN</b> . (This device has 2 IP Addresses; one for the local LAN, and another for the WAN port.)
<b>Network Mask</b>	The Network Mask (Subnet Mask) for the IP Address above.
<b>PPPoE Link Status</b>	This indicates whether or not the connection is currently established.  If the connection does not exist, the <i>Connect</i> button can be used to establish a connection.  If the connection currently exists, the <i>Disconnect</i> button can be used to break the connection.
<b>Log</b>	The Connection Log shows status messages relating to the existing connection. The most common messages are listed in the following table.

## Connection Log

Message	Description
<b>Connect on Demand</b>	If not connected, establish a connection to your ISP
<b>Manual connection</b>	Connection attempt started by the "Connect" button.
<b>Reset physical connection</b>	Preparing line for connection attempt.
<b>Connecting to remote server</b>	Attempting to connect to the the ISP's server.
<b>Remote Server located</b>	ISP's Server has responded to connection attempt.
<b>Start PPP</b>	Attempting to login to ISP's Server and establish a PPP connection.
<b>PPP up successfully</b>	Able to login to ISP's Server and establish a PPP connection.
<b>Idle time-out reached</b>	The connection has been idle for the time period specified in the "Idle Time-out" field. The connection will now be terminated.
<b>Disconnecting</b>	The current connection is being terminated, due to either the "Idle Time-out" above, or "Disconnect" button being clicked.
<b>Error: Remote Server not found</b>	ISP's Server did not respond. This could be a Server problem, or a problem with the link to the Server.
<b>Error: PPP Connection failed</b>	Unable to establish a PPP connection with the ISP's Server. This could be a login problem (name or password) or a Server problem.
<b>Error: Connection to Server lost</b>	The existing connection has been lost. This could be caused by a power failure, link failure, or Server failure.
<b>Error: Invalid or unknown packet type</b>	The data received from the ISP's Server could not be processed. This could be caused by data corruption (from a bad link), or the Server using a protocol which is not supported by this device.

Click **Save** for activating the changes you made.

## WAN Status Direct Connection

## WAN Status Direct Connection



WAN Connection Status.  
Use the "Reconnect" button only if the connection is lost.

### WAN Status

Physical Address: 00-c0-02-42-23-77

I.P. Address: 0.0.0.0

Network Mask: 0.0.0.0

Default Gateway: 0.0.0.0

DHCP Client: Enable



## WAN Status Direct Connection

<b>Physical Address</b>	The "Hardware" address of this device, as seen by other devices on the WAN.
<b>IP Address</b>	The IP Address of this device, as seen by devices on the <b>WAN</b> . (This device has 2 IP Addresses; one for the local LAN, and another for the WAN port.)
<b>Network Mask</b>	The Network Mask for the above IP Address.
<b>Default Gateway</b>	IP address of the Router/Gateway on the WAN port.
<b>DHCP Client</b>	Displays "Enabled" or "Disabled", indicating whether this device is acting as a DHCP client on the external LAN or WAN.
<b>Reconnect</b>	Use this button if the connection seems to have been lost, and no data is being transferred. (This button has no effect unless acting as a DHCP Client.)
<b>Refresh</b>	Update the data on screen.

## LAN Status

# Status LAN/Device



Current status of this device.  
The DHCP Table shows IP Addresses used by the DHCP Server.

## Device

Firmware Version: Version 1.0 Release 08  
Hardware ID: 00da00955c11  
Network Address Translation: Enable

## LAN Port

Physical Address: 00-c0-02-42-23-76  
I.P. Address: 192.168.0.1  
Network Mask: 255.255.255.0  
DHCP Server: Enable

## DHCP Table

I.P. Address	Physical Address	Status
192.168.0.4	00-90-d1-00-e4-9b	leased
192.168.0.3	00-90-d1-07-4d-a8	leased
192.168.0.2	00-60-b0-45-71-41	leased

## LAN Status

### Device

<b>Firmware Revision</b>	Version of the firmware which is currently installed.
<b>Hardware ID</b>	The hardware ID of this device, used by the manufacturer.
<b>Network Address Translation</b>	This will display "Enabled" (NAT is On) or "Disabled" (NAT is Off).

### LAN Port

<b>Physical Address</b>	The "Hardware" address of this device, as seen by other devices on the Internal LAN.
<b>IP Address</b>	The IP Address of this device, as seen by other devices on the Internal LAN.
<b>Network Mask</b>	The Network Mask (Subnet Mask) for the IP Address above.
<b>DHCP Server</b>	This shows the status of the DHCP Server function. The value will be "Enabled" or "Disabled".

**DHCP Table**

This table is empty if DHCP is disabled.

<b>IP Address</b>	The IP Address which has been allocated by the DHCP server to the other device.
<b>Physical Address</b>	The Physical Address (Hardware Address) of the device which has been allocated a IP Address.
<b>Status</b>	Possible Status values are "Leased" (the IP Address is allocated to the device shown) or "Reserved" (the IP Address is not available).



## PC SETUP

- [Overview](#)
- [TCP/IP Settings](#)
- [Internet Settings](#)
- [Printer Settings](#)
- [Macintosh](#)
- [Wireless Card Settings](#)

### Overview

- Each PC's TCP/IP settings must be correct.
- PCs must also be configured for Internet access via the LAN, rather than by a dial-up connection.

### TCP/IP Settings

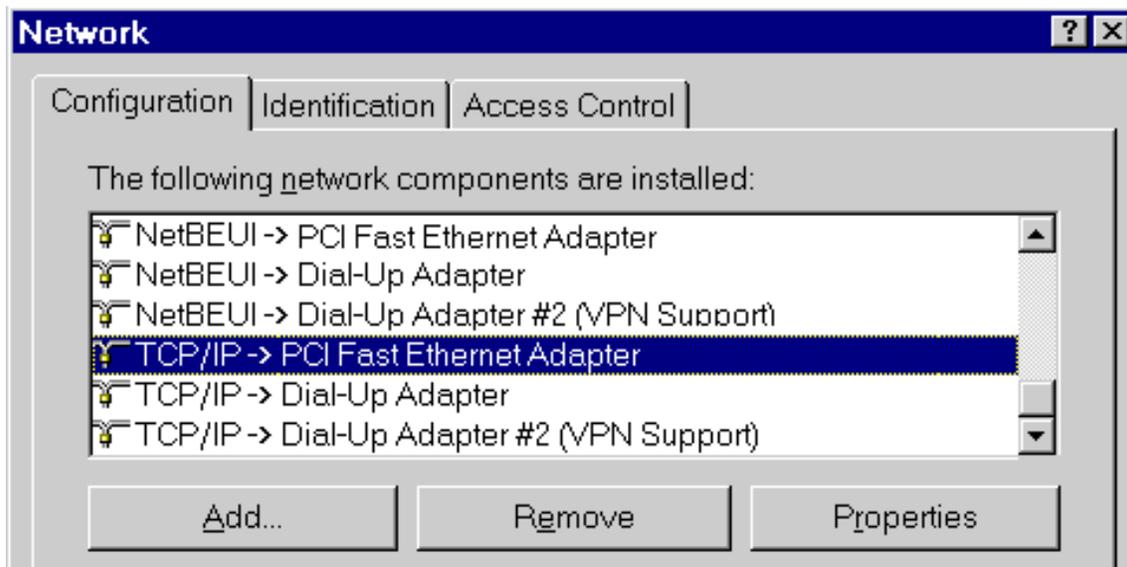
#### If you use the DHCP Server function:

Configure each PC to be a DHCP client, as follows:

#### DHCP Client Setup

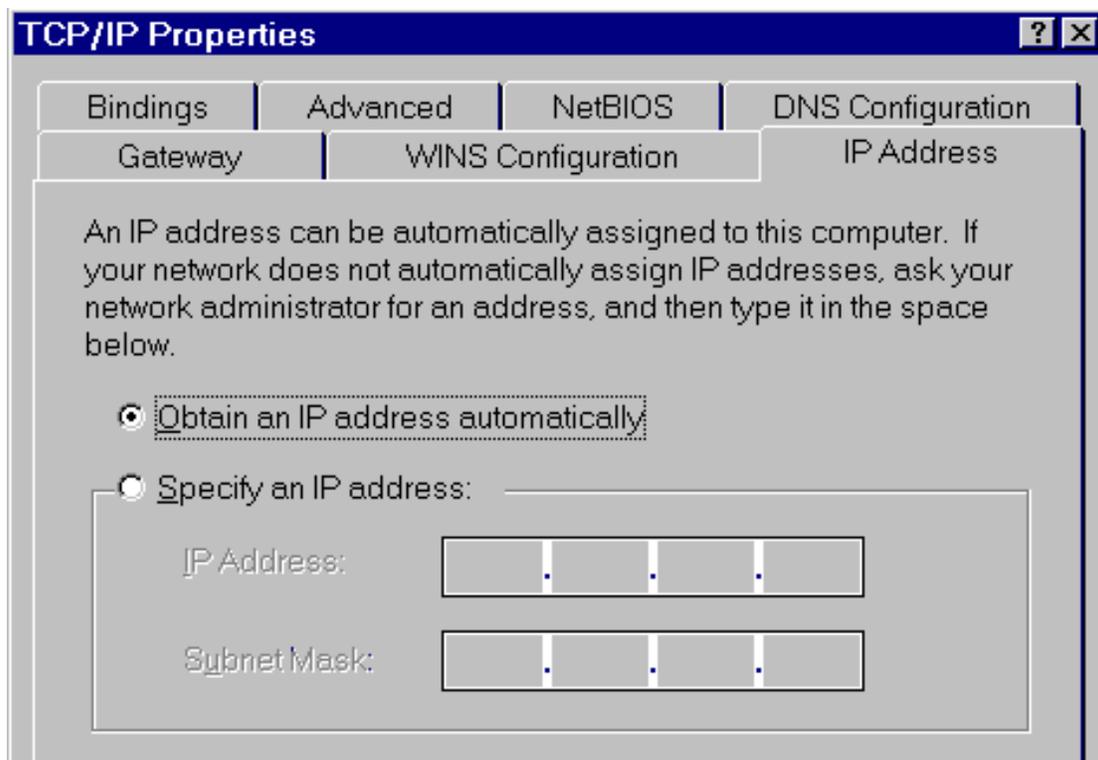
#### Windows® 95/98/Me

1. Select the Network Neighborhood icon on the desktop, then Properties. You will see a screen like the one below:



**Figure 1: Network Configuration tab**

2. If a line like the one highlighted ("TCP/IP -> Network Card") is not listed, select *Add-Protocol-Microsoft-TCP/IP-OK* to add it.
3. Select *Properties* for the "TCP/IP -> Network card" entry. You will then see a screen like the following example:

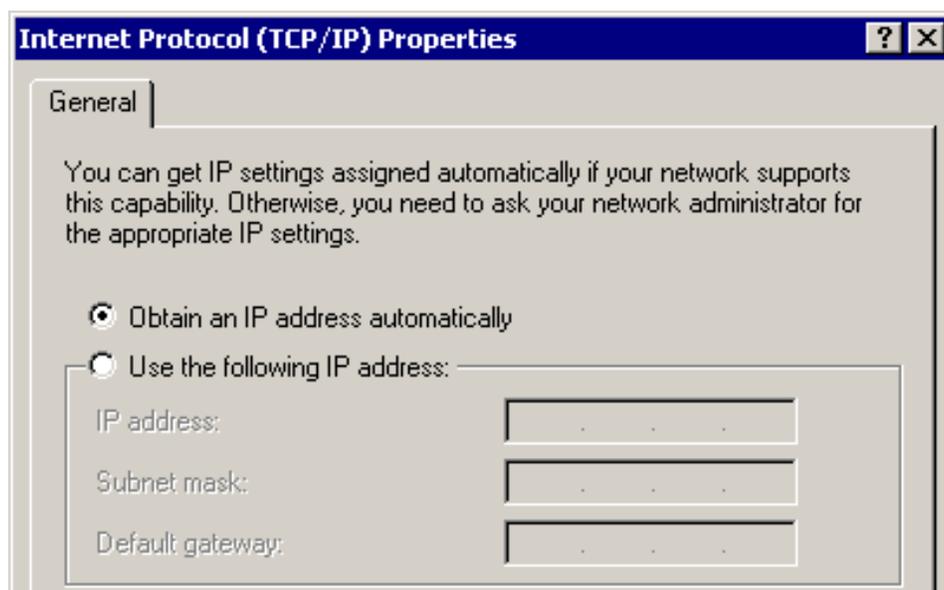


**Figure 2: TCP/IP Properties - DHCP**

4. On the *IP Address* tab, click the radio button for "Obtain an IP address automatically", as above, then reboot. Your PC will obtain an IP Address from Tintoretto Wave

#### Windows 2000®

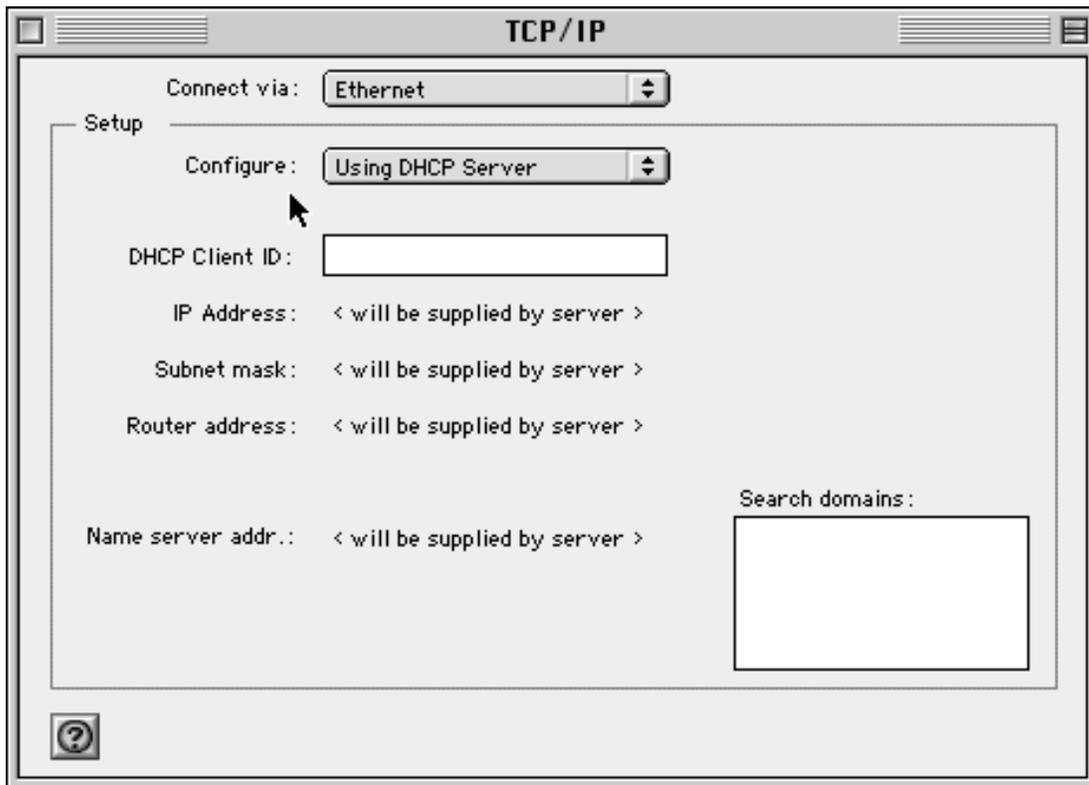
- From Windows's desktop select and right click the Network Neighborhood icon, select Properties.
- Double click the LAN Settings and click on Properties.
- Select TCP/IP and click on Properties.



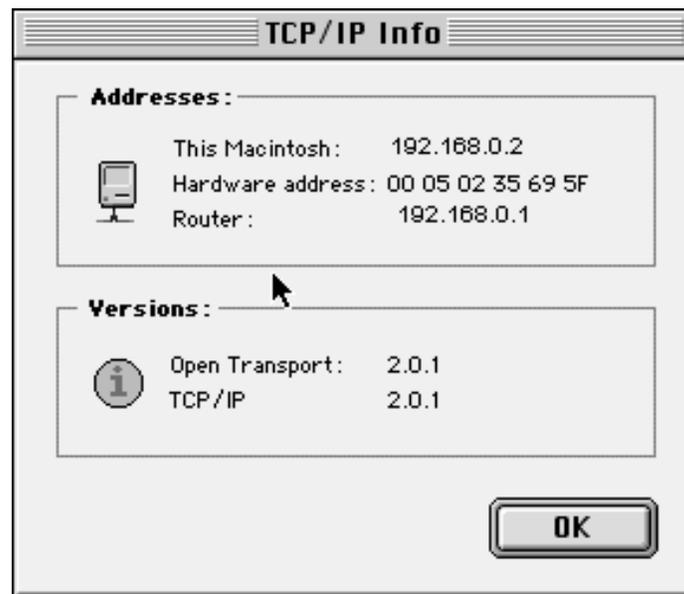
- Select Obtain IP address automatically. Click OK until closing all the opened tabs.

#### Macintosh®

- From the **Apple menu** select **Control Panels** and **TCP/IP**.



- You may use the File:Configurations:Export menu to save your current settings.
- Select **Ethernet** for **Connect via** and **Use DHCP Server** for **Configure**.
- Close the TCP/IP control and save.
- Restart your Mac in order to make the changes active and get an IP address from Tintoretto Wave.
- Once you have restarted your Mac you can check the assigned IP address through the Control: TCP/IP:File:Get Info menu.



## Windows® and Macintosh®

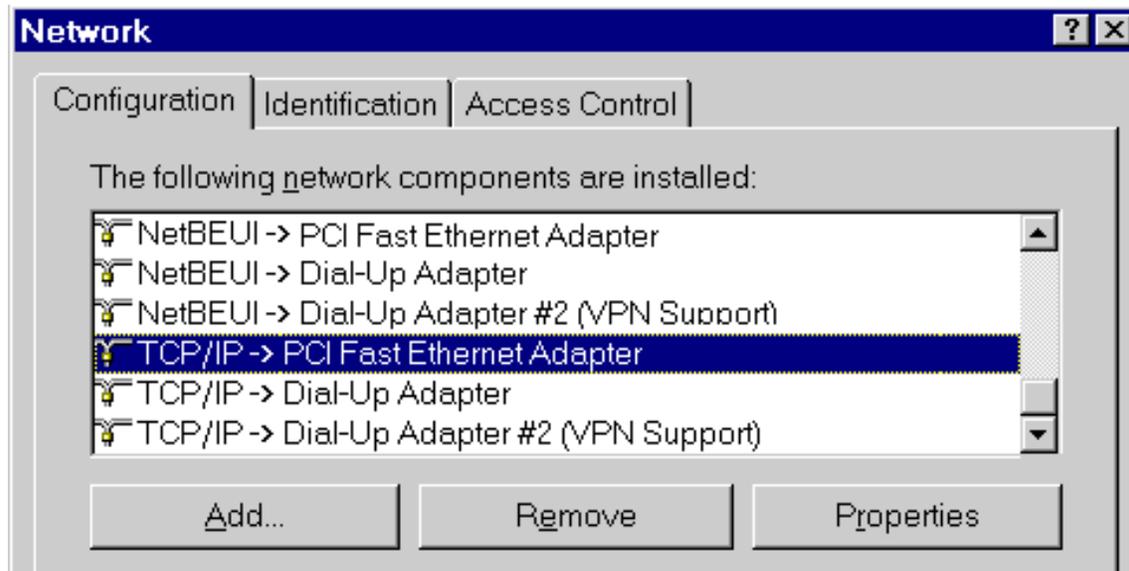
### If your LAN already has a DHCP server:

- On the [LAN Tab](#), disable the DHCP server in Tintoretto Wave.
- Configure your existing DHCP server to provide Tintoretto Wave's *IP Address* as the "Default Gateway".

## Static (fixed) IP Addresses

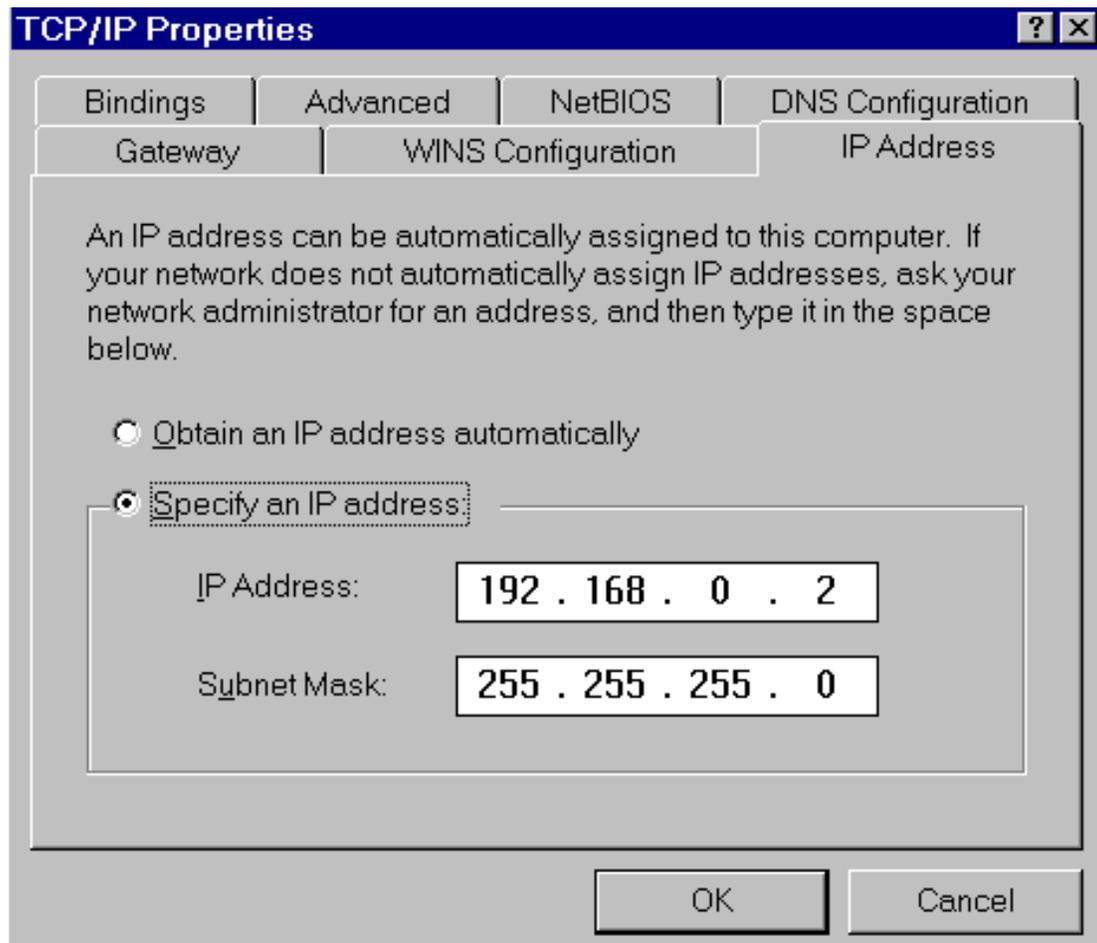
### Windows® 95/98/Me

- Select the *Network Neighborhood* icon on the desktop, then *Properties*. You will see a screen like the one below:



**Figure 1: Network Configuration tab**

- If a line like the one highlighted ("TCP/IP -> Network Card") is not listed, select *Add-Protocol-Microsoft-TCP/IP-OK* to add it.
- Select *Properties* for the "TCP/IP -> Network card" entry. You will then see a screen like the following example:

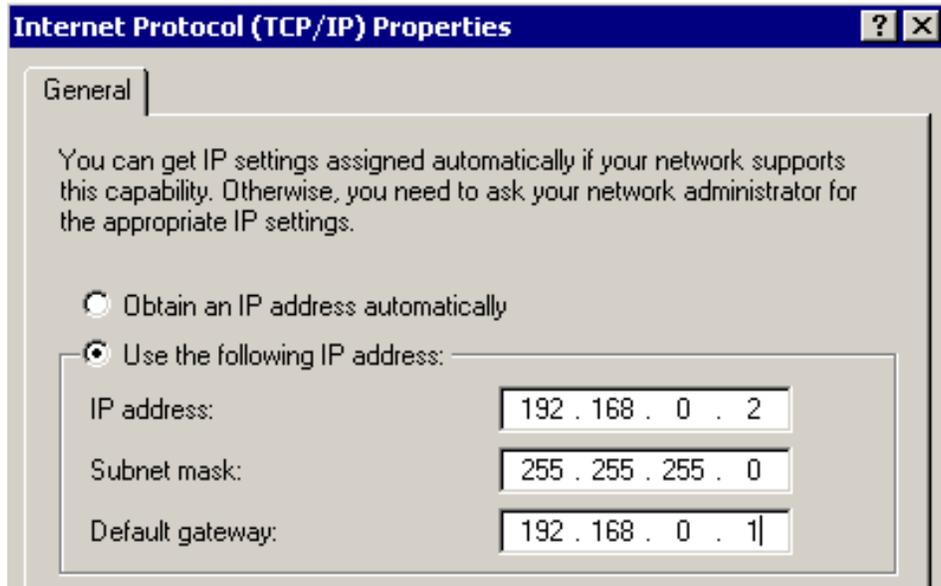


- Set IP address and Network Mask as shown in the figure.

- Set the *Gateway* tab, set the *Default Gateway Address* to Tintoretto Wave's IP IP Address.
- On the **DNS** tab, enter the values as provided from the ISP.
- Click on OK and reboot the computer.

### Windows 2000®

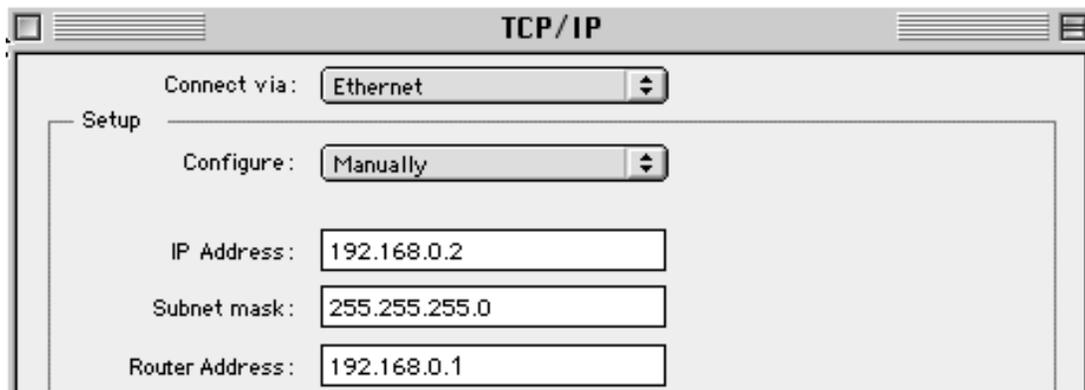
- From Windows's desktop select and right click the Network Neighborhood icon, select Properties.
- Double click the LAN Connection icon and click on Properties.
- Select TCP/IP and click on Properties.



- Type the IP addresses as shown in the figure
- Add the DNS values as provided from the ISP. Click OK until closing all the opened tabs.

### Macintosh®

- From the **Apple menu** select **Control Panels** and **TCP/IP**.



You may use the File:Configurations:Export menu to save your current settings.

- Select **Ethernet** for **Connect via** and **Manually** for **Configure**.
- Configure the addresses as shown.
- Add Tintoretto Wave's IP address in the Router address tab
- Add the DNS values as provided by the ISP.
- Close the TCP/IP control and save.
- Restart your Mac in order to make the changes active

### If your LAN has a Router or more Routers

- Do NOT change any TCP/IP settings on any PC.

- Configure the router. See [Routing](#) for details.
- 

## Internet Settings

For Internet access, each PC must be configured:

For Internet access via the LAN, rather than by dial-up connection. In Windows 95/98/Me/2000:

- Select *Start Menu - Settings - Control Panel - Internet Settings*.
  - Select the *Connection* tab, and then click the *Setup* button to start the *Connection Wizard*.
  - Set the Internet access to "via local area network (LAN)" when requested.
- 

## Printer Settings

Tintoretto Wave provides printing support for 2 methods of printing from Windows:

### **Print Port Driver.**

After installing the Print Port Driver, Windows users can print directly to Tintoretto Wave. Print jobs are spooled (queued) on each PC.

The supplied Print Port Driver supports Windows 95/98, Windows ME, Windows NT4.0, and Windows 2000.

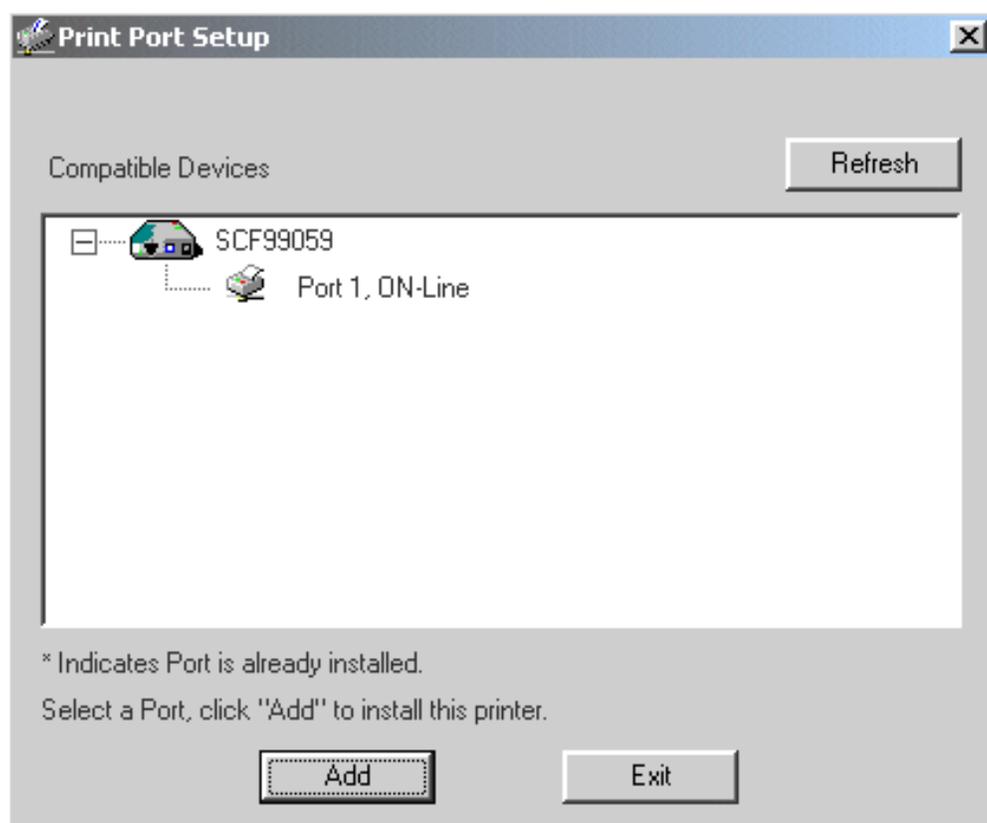
### **LPD/LPR Printing.**

If using Windows NT 4.0 Server or Windows 2000 Server, LPD/LPR printing can be used. No software needs to be installed on either the Windows Server or each client PC. Print jobs will be spooled (queued) on the Windows Server, and can be managed using the standard Windows Server tools.

## Print Port Driver Setup

The following procedure is for Windows 95/98, Windows ME, Windows NT4.0, and Windows 2000.

- Insert the supplied CD-ROM into your drive.
- Select the Utility, Tintoretto Wave folder
- Run SETUP(.EXE)
- At the Select Components screen, select the Print Port Driver option.
- Follow the prompts to complete the installation.
- The Print Port Setup will then run, and the following screen will be displayed.



- Select the desired device and port, and then click the "**Add**" button.
- A pop-up message will inform you if the port has been created successfully, and then the Windows Add Printer wizard will start.
- Select the correct **Printer Manufacturer and Model**, or use the "**Have Disk**" option if appropriate.
- If desired, change the Printer name so it indicates the device used (e.g. HP2100 on SCA43600)ù
- If prompted about Sharing, **do NOT** enable Sharing.

Installation is now complete. You can now print using this printer.

## Management

- **Print jobs** can be managed like any Windows printer. Open the Printers folder (Start - Settings - Printers) and double-click any printer to see the current print jobs.
- **If the printer attached to the Tintoretto Wave is changed**, just run this program again, and select the correct printer.
- To **delete a port** created by this setup program, use the Windows Delete Port facility: Right-click any printer in the Printers folder, and select Properties., locate the Delete Port button. This button is on the Details or Ports tab, depending on your version of Windows.
- If Tintoretto Wave's **IP Address is changed**, and you can no longer print, delete the port (see procedure above) and re-install it.

## Port Options

The options for the Print Port Driver are accessed via the Windows Port Settings button. Use Start - Settings - Printers to open the Printers folder, then right-click the Printer, and select Properties. The Port Settings button is on the Details or Port tab, depend-ing on your version of Windows.

Items shown on this screen are as follows:

<b>Port</b>	If desired, click Browse to select a different device. (The Select Device Port button is provided to allow this software to work with multi-port models.)  The Port Name is shown in the Printer's Properties.
<b>Banner</b>	Check this option to print a banner page before each print job. <ul style="list-style-type: none"> <li>● If using a PostScript Printer, check the PostScript box.</li> <li>● The User Name will be printed on the banner page.</li> </ul>
<b>Retry interval</b>	Sets how often Windows will poll Tintoretto Wave to establish a connection when the printer is busy. Increase this value if you get too many warning messages.

## LPD/LPR Printing

LPD/LPR printing can be used with Windows NT 4.0 Server or Windows 2000. No software needs to be installed.

### Server

#### Windows NT 4.0

To use LPD printing, **Microsoft TCP/IP Printing** must be installed and enabled. This can be checked using Start-Settings-Control Panel-Network - Services.

To install LPD printing using Tintoretto Wave, follow this procedure:

- Go to Start-Settings-Printer and invoke the Add Printer wizard.
- When prompted with "This printer will be managed by..", select **My Computer** and click Next.
- Select **Add Port**, then select **LPR Port** and click **New Port**.
- In the Dialog requesting Name of Address of server providing lpd, enter the **IP address** of Tintoretto Wave.
- For Name of printer or print queue on that server, enter **L1**
- Click **OK**. When returned to the Printer Ports window, simply select **Close** and then install your printer driver as usual.
- When prompted whether or not the printer will be shared, select the **Sharing** radio button.
- In the Shared dialog box, enter the shared **printer name**. The shared name is how other users will see this printer. You should advise client PCs of the Server name and this printer name.
- Click **OK** to save and exit.

## Windows 2000

The LPD/LPR Port is not enabled by default. To enable it, use this procedure:

- In Control Panel, select **Add/Remove Programs**, then Windows Components.
- Select **Other Network File and Print Services**, then click the Details button.
- Enable **Print Services for Unix**, and click **OK**.
- Click **Next** and complete the Wizard.

### Adding the Printer

- Open your Printers folder, and start the Add Printer Wizard.
- When prompted, select **Local Printer**.
- On the Select the Printer Port screen, select **LPR Port**, as shown below. Click **Next** to continue.
- In the Dialog requesting Name of Address of server providing lpd, enter the **IP address** of Tintoretto Wave.
- For Name of printer or print queue on that server, enter **L1**.
- Click **OK**, and then **Next**, and continue the Wizard.
- At the Select Sharing screen, select the Radio Button for Share As, and enter the shared printer name. The shared name is how other users will see this printer. You should advise client PCs of the Server name and this printer name.
- Complete the Add Printer wizard.

### Client

After configuring the Windows Server, client PCs on the LAN can install the new printer.

The following procedure is for Windows 95/98/ME, Windows NT4.0, and Windows 2000 workstation.

- Open your Printers folder, and start the Add Printer Wizard.
  - When prompted, select **Network Printer**.
  - When prompted for Network Path or Queue Name, click the **Browse** button, and locate the Server and Printer which your Network Administrator advised you to use.
  - Click **OK**, then **Next**.
  - Select the correct printer **Manufacturer and Model**, as advised by your Network Administrator, and click Next.
  - Follow the prompts to complete the Wizard.
  - The new printer will be listed with any other installed printers, and may be selected when printing from any Windows application.
- 

### Macintosh

At the creation date of this document, Macintosh printing is not yet supported. Please refer to [www.digicom.it](http://www.digicom.it) for the firmware upgrade adding this feature (Q3/2001).

Macintosh computers can access the Internet via Tintoretto Wave. The procedure is as follows.

- Open the **TCP/IP** Control Panel.
- Select **Ethernet** from the Connect via pop-up menu.
- Select **Using DHCP Server** from the Configure pop-up menu.
- Close the TCP/IP panel, saving your settings.

If using manually assigned IP addresses instead of DHCP, the only change required is to set the **Router Address** field to **Tintoretto Wave's IP Address**.

---

## Wireless Card Settings

Tintoretto Wave's [Wireless](#) settings must match the Wireless stations settings in order to allow them to use it as an Access Point.

<b>Mode</b>	The mode must be set to <b>Infrastructure</b> .
<b>SSID (ESSID)</b>	Service Set Identifier. This must match the value used on Tintoretto Wave. Generally set to <b>ANY</b>  Note! The SSID is <b>case sensitive</b>
<b>Channel</b>	Channell used for transmission. his must match the value used on Tintoretto Wave
<b>WEP</b>	Wireless Equivalent Privacy. Data encryption, disabled by default. <ul style="list-style-type: none"> <li>● If WEP is <b>disabled</b> on Tintoretto Wave, all stations must have WEP disabled.</li> <li>● If WEP was <b>enabled</b> on Tintoretto Wave, each station must have WEP enabled, and use compatible WEP keys, as explained below.</li> </ul>
<b>WEP Key</b>	Encryption key If using WEP, then for each Wireless Station: <ul style="list-style-type: none"> <li>● The setting (64 or 128 Bit) must be the same as on Tintoretto Wave.</li> <li>● The keys must match. If using 64 Bit encryption, the station's default key must match the equivalent entry in Tintoretto Wave's Key Table, and Tintoretto Wave's default key must match the equivalent key in the station's key table.</li> </ul>





## DHCP

- [DHCP Server](#)
  - [DNS \(Domain Name Server\) IP Address](#)
- 

### DHCP Server

#### Overview

- A DHCP (Dynamic Host Configuration Protocol) server provides a valid IP address, Gateway address and DNS addresses to a DHCP client (PC or device) upon request.
- Tintoretto Wave can act as a **DHCP Server**. The default value is ON (Enabled), and use of this feature is strongly recommended.
- To use this feature, ensure that **Enable** is checked. Also, the PCs must be configured to act a DHCP clients. See [DHCP Client Setup](#) for details of this procedure.

#### IP Address allocated by the DHCP Server

- Normally, the default values for the DHCP Server do not need to be changed. However, if your LAN already has some devices using fixed IP Addresses, you must ensure that each of those devices uses an IP Address which is compatible with the IP Addresses allocated by the DHCP Server. "Compatible" means:
  - The IP Address is from the same address range as the DHCP Server. By default, Tintoretto Wave uses the IP Address range 192.168.0.1 to 192.168.0.254.
  - The IP Address must NOT be within the group allocated by the DHCP Server. By default, Tintoretto Wave allocates addresses between 192.168.0.2 to 192.168.0.51. Therefore, addresses between 192.168.0.52 and 192.168.0.254 are available for other devices.
  - All devices must use the same *Network Mask* (Subnet Mask).
- If you have non-PC devices on your LAN, it may be more convenient to change the IP Addresses allocated by the DHCP Server function in Tintoretto Wave, rather than change the IP Addresses used by the existing devices. To do this:
  - For the *Start IP Address*, enter the first IP Address of the range of IP Addresses to be allocated by the DHCP Server.
  - In the *End IP Address*, enter the last IP Address of the range of IP Addresses to be allocated by the DHCP Server function.
  - Ensure that the range is large enough for all of the PCs and devices which will be acting as DHCP clients and requesting an IP Address. The default number of clients is 50; the maximum is 253.

## Use of another DHCP Server

You can only use one (1) DHCP Server. If you wish to use another DHCP Server, rather than Tintoretto Wave's, the following procedure is required.

- Disable the DHCP Server feature in Tintoretto Wave. This setting is on the LAN screen.
  - Configure the DHCP Server to provide Tintoretto Wave's IP Address as the Default Gateway.
- 

## DNS (Domain Name Server) IP Address

Space is provided for 3 entries.

Enter additional values if you wish. If multiple entries are provided, the first available DNS will be used.

---



## Routing

- [Overview](#)
  - [Routing Example](#)
  - [Routing Table Entries](#)
- 

### Overview

While Tintoretto Wave includes a standard routing table, this feature can be completely ignored if you do not have a router in your LAN.

If you DO have a router, it is necessary to configure BOTH the Router and the Routing table in Tintoretto Wave correctly, as described in the following sections.

### Router Configuration

It is essential that all IP packets for devices not on the local LAN be passed to Tintoretto Wave, so that they can be forwarded to the Internet. To achieve this, the Routers must be configured to use Tintoretto Wave as the *Default Route* or *Default Gateway*.

### Local Router

The local router is the Router installed on the same LAN segment as Tintoretto Wave. This router requires that the *Default Route* is Tintoretto Wave itself. Typically, routers have a special entry for the *Default Route*. It should be configured as follows.

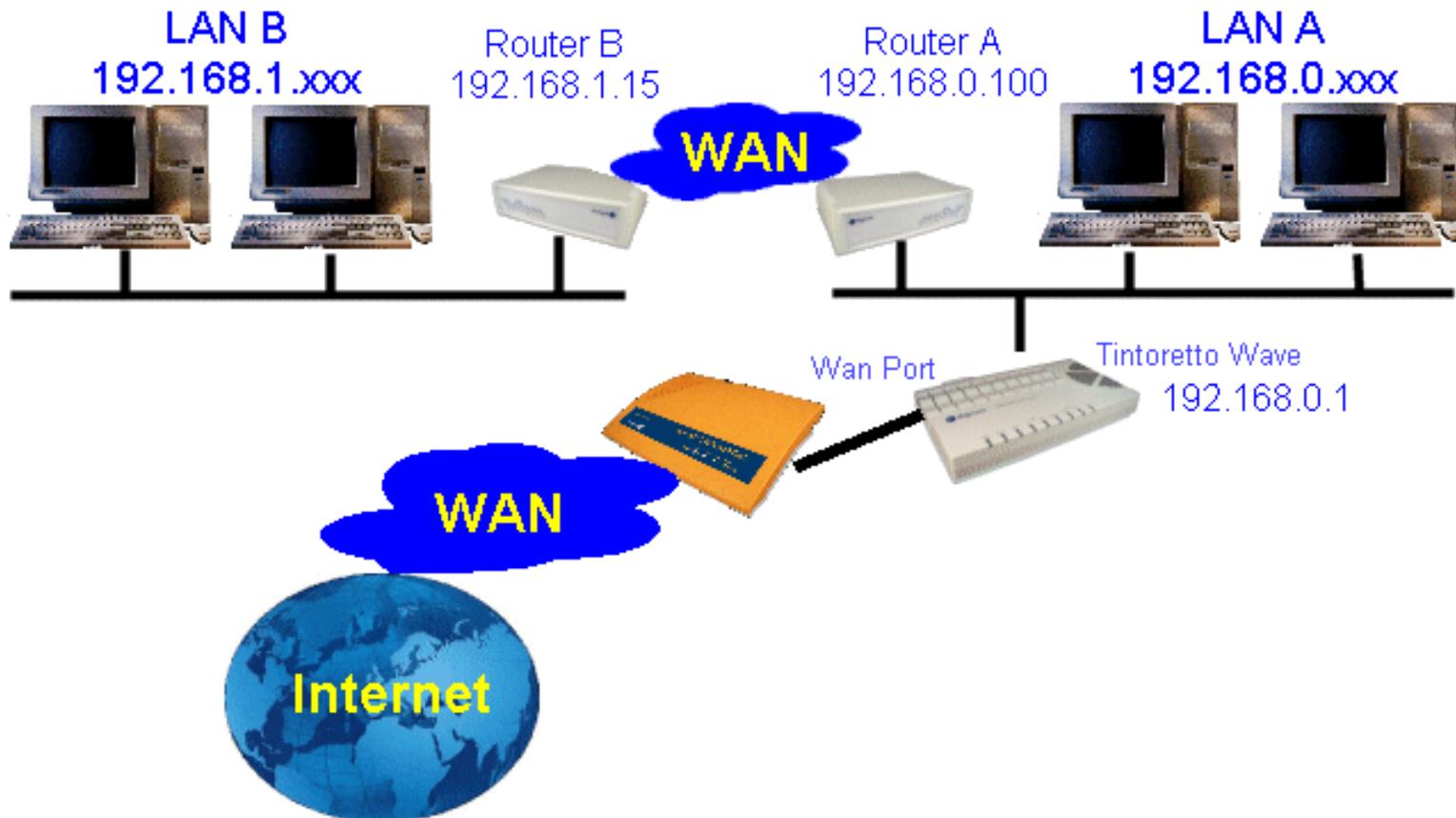
<b>Destination IP Address</b>	Normally 0.0.0.0, but check your router documentation.
<b>Network Mask</b>	Normally 0.0.0.0, but check your router documentation.
<b>Gateway IP Address</b>	The IP Address of Tintoretto Wave.
<b>Metric</b>	1

### Other Routers

Other routers must use Tintoretto Wave's *Local Router* as the *Default Route*. The entries will be the same as Tintoretto Wave's local router, with the exception of the *Gateway IP Address*.

- For a router with a direct connection to Tintoretto Wave's local Router, the *Gateway IP Address* is the address of Tintoretto Wave's local router.
  - For routers which must forward packets to another router before reaching Tintoretto Wave's local router, the *Gateway IP Address* is the address of the intermediate router.
-

## Routing Example



**Figure 1: Routing Example**

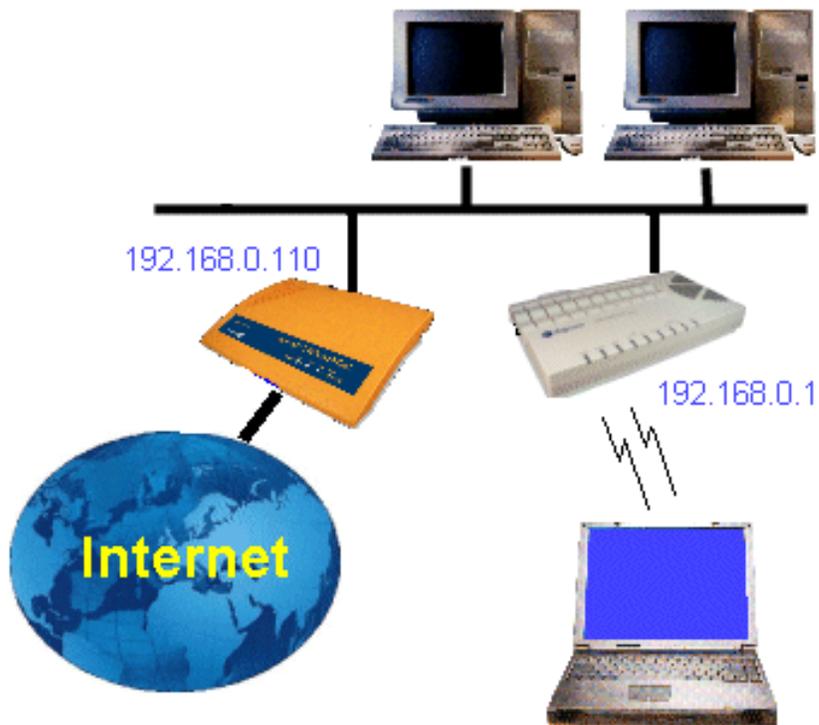
For the LAN shown above, with 2 routers and 2 LAN segments, the required entries would be as follows.

<b>Tintoretto Wave</b>		Note
Destination IP Address	192.168.1.0	LAN B
Network Mask	255.255.255.0	
Gateway IP Address	192.168.0.100	Router A
Metric	1	
<b>ROUTER A</b>		Note
Destination IP Address	192.168.1.0	LAN B
Network Mask	255.255.255.0	
Gateway IP Address	192.168.0.15	Router B
<b>Default Route</b>		
Destination IP Address	0.0.0.0	*
Network Mask	0.0.0.0	*
Gateway IP Address	192.168.0.1	Tintoretto Wave
<b>ROUTER B</b>		Note
Destination IP Address	192.168.0.0	LAN A
Network Mask	255.255.255.0	
Gateway IP Address	192.168.0.100	Router A
<b>Default Route**</b>		
Destination IP Address	0.0.0.0	*
Network Mask	0.0.0.0	*
Gateway IP Address	192.168.0.100	Router A

\*This is the syntax normally used for a default route. Check if it is valid for your routers as well

\*\*In the above example, this could be the unique entry for Router B's routing table.

## Access the Internet through a LAN router



If there is already a router on the LAN you can simply add it's address into Tintoretto Wave's routing table in order to allow all clients to share the same Internet access.

- Access the configuration
- Select the LAN window
- Type **0.0.0.0** for *Destination Address*
- Type **0.0.0.0** for *Network Mask*
- Type the router's IP address (e.g. 192.168.0.110) for the *Gateway IP Address*
- Select **LAN** for *Interface*
- Select **1** for *Metric*.
- Click on **Add**.

## Routing Table

<h1>Routing</h1>	 This is a standard static routing table. Ignore this unless your LAN has an another Router or Gateway.
<b>Routing Table</b>	Select Entry: <input type="text" value="1)0.0.0.0/0.0.0.0/192.168.0.110/LAN/1"/> <input type="button" value="Get Data"/>
<b>Details</b>	Destination IP Address: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Network Mask: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Gateway IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="110"/> Interface: <input type="text" value="LAN"/> <input type="button" value="v"/> Metric: <input type="text" value="1"/>
<input type="button" value="Clear Form"/>	
<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="List All"/> <input type="button" value="Cancel"/>	

**In order to delete an existing entry:**

- Select the entry from **Existing Entries in Routing Table**.
- Click on **Get Data**.
- Click on **Delete**.

**Create a new entry:**

- Type in Destination IP Adress, Network Mask, Gateway, Interface and Metric.
- Click on **Add** .

In order to modify an entry (or refresh the displayed informations) select the entry, modify and click **Update**

In order to display all the existing routes (Routing Table) click on **List All**

**Routing Table data**

<b>Destination IP Address</b>	The network address of the remote LAN segment. For standard class "C" LANs, the net-work address is the first 3 fields of this Destination IP Address. The 4th (last) field can be left at 0.
<b>Network Mask</b>	The Network Mask used on the remote LAN segment. For class "C" networks, the standard Network Mask is 255.255.255.0
<b>Gateway IP Address</b>	Select the appropriate interface - LAN (Internal LAN) or WAN (External LAN or WAN) from the drop-down list.
<b>Metric</b>	The number of routers which must be traversed to reach the remote LAN segment. The default value is 1.



---

## [Advanced Features](#)

- [Overview](#)
  - [Available Options](#)
  - [Special Internet Applications](#)
  - [Virtual Servers](#)
  - [User Defined Virtual Servers](#)
  - [VPN Servers](#)
  - [DMZ](#)
- 

### **Overview**

Generally, the following Settings and Features are optional. These settings are to be used if the LAN settings have to be modified, if there are one or more routers connected to the same LAN or the Administrator wants to use the advanced features provided by Tintoretto Wave.

---

### **Available Options**

# Advanced Internet



These features are optional, and should be disabled when not required. Use the links to configure each feature.

## [Special Internet Applications](#)

Configure this device to allow use of non-standard Internet applications, such as Video-conferencing, 2-way communication, and Games Servers.

## [Virtual Servers](#)

Allow Internet users to access Servers on your LAN. Without this feature, access would be blocked by the Firewall in this device.

## [User-Defined Virtual Servers](#)

Define non-standard Virtual Servers using port numbers.

## [DMZ](#)

Allows unrestricted 2-way Internet communication by 1 computer.

## Operation

Special Internet Applications  Enable  Disable

Virtual Servers  Enable  Disable

DMZ  Enable  Disable



### [Special Internet Applications](#)

This feature is only required if you wish to use Internet applications which require 2-way communication, multiple connections, or combined TCP/UDP connections.

### [Virtual Servers](#)

### [User Defined Virtual Servers](#)

This features allow you to make Servers on your LAN accessible to Internet users. Normally, Internet users would not be able to access a server on your LAN because:

### [DMZ](#)

This feature, if enabled, allows one (1) computer on your LAN to be exposed to all users on the Internet, allowing unrestricted 2-way communication between the "DMZ" PC and other Internet users or Servers.

This allows connection to special-purpose servers which require proprietary client software, or 2-way user connections such as Videoconferencing, which requires both users to run special software.

## Special Internet Applications

- Examples of such applications are Internet Videoconferencing\*, Telephony, Games Servers, and other special-purpose Servers.
- Generally, you will become aware of the need for this feature when an Internet application is unable to function correctly.
- At any time, only one (1) PC can use each Special Application.

\*Netmeeting could not be supported. Refer to web site [www.digicom.it](http://www.digicom.it), Online Help for more details.

<b>Special Applications</b>	 Enable existing Special Applications, or create your own. If an application still does not work, use the DMZ feature.													
<b>Select Entry</b>	Name: <input type="text" value="quicktime"/> <input type="button" value="Get Data"/> Click "Get Data" to see correct data for selected application.													
<b>Details</b>	<table border="1"> <tr> <td colspan="2">Name: <input type="text" value="quicktime"/></td> <td><input type="checkbox"/> Enable</td> </tr> <tr> <td rowspan="2">Outgoing</td> <td>Protocol: <input type="text" value="TCP"/></td> <td></td> </tr> <tr> <td colspan="2">Port Range: Start <input type="text" value="554"/> Finish <input type="text" value="554"/></td> </tr> <tr> <td rowspan="2">Incoming</td> <td>Protocol: <input type="text" value="UDP"/></td> <td></td> </tr> <tr> <td colspan="2">Port Range: Start <input type="text" value="6970"/> Finish <input type="text" value="6999"/></td> </tr> </table> <div style="text-align: right;"><input type="button" value="Clear Form"/></div>	Name: <input type="text" value="quicktime"/>		<input type="checkbox"/> Enable	Outgoing	Protocol: <input type="text" value="TCP"/>		Port Range: Start <input type="text" value="554"/> Finish <input type="text" value="554"/>		Incoming	Protocol: <input type="text" value="UDP"/>		Port Range: Start <input type="text" value="6970"/> Finish <input type="text" value="6999"/>	
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<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="List All"/> <input type="button" value="Cancel"/>														

### To Enable a defined Application

- Select it from the drop-down list
- Click "Get Data"
- Check the Enable checkbox
- Click "Update"

### To Disable a defined Application

- As above, but uncheck the Enable checkbox.

### To Delete a defined Application

- Select it from the drop-down list,
- Click "Delete"

**To Modify (Edit) a defined Application**

- Select it from the drop-down list,
- Click "Get Data"
- Make any desired changes
- Click "Update"

**To Create a new Application**

- Click "Clear Form"
- Enter the required data, as described below
- Click "Add"

**To List all Applications click "List All"**

<b>Enable</b>	Use this to Enable or Disable support for this application, as required.
<b>Name</b>	Enter a descriptive name to identify this application entry.
<b>Outgoing</b>	
<b>Protocol</b>	The protocol (TCP or UDP) used when you connect to the special application service.
<b>Port Range: Start</b>	The beginning of the range of port numbers used by the application server, for data you send to it. If the application uses a single port number, enter it in both the "Start" and "Finish" fields.
<b>Port Range: Finish</b>	The end of the range of port numbers used by the application server, for data you send.
<b>Incoming</b>	
<b>Protocol</b>	The protocol (TCP or UDP) used when the application or service sends data to you.
<b>Port Range: Start</b>	The start of the range of port numbers used by the application server when data is sent to you. If using only one port number, enter it in both the "Start" and "Finish" fields.
<b>Port Range: Finish</b>	The end of the range of port numbers used by the application server, when data is sent to you.

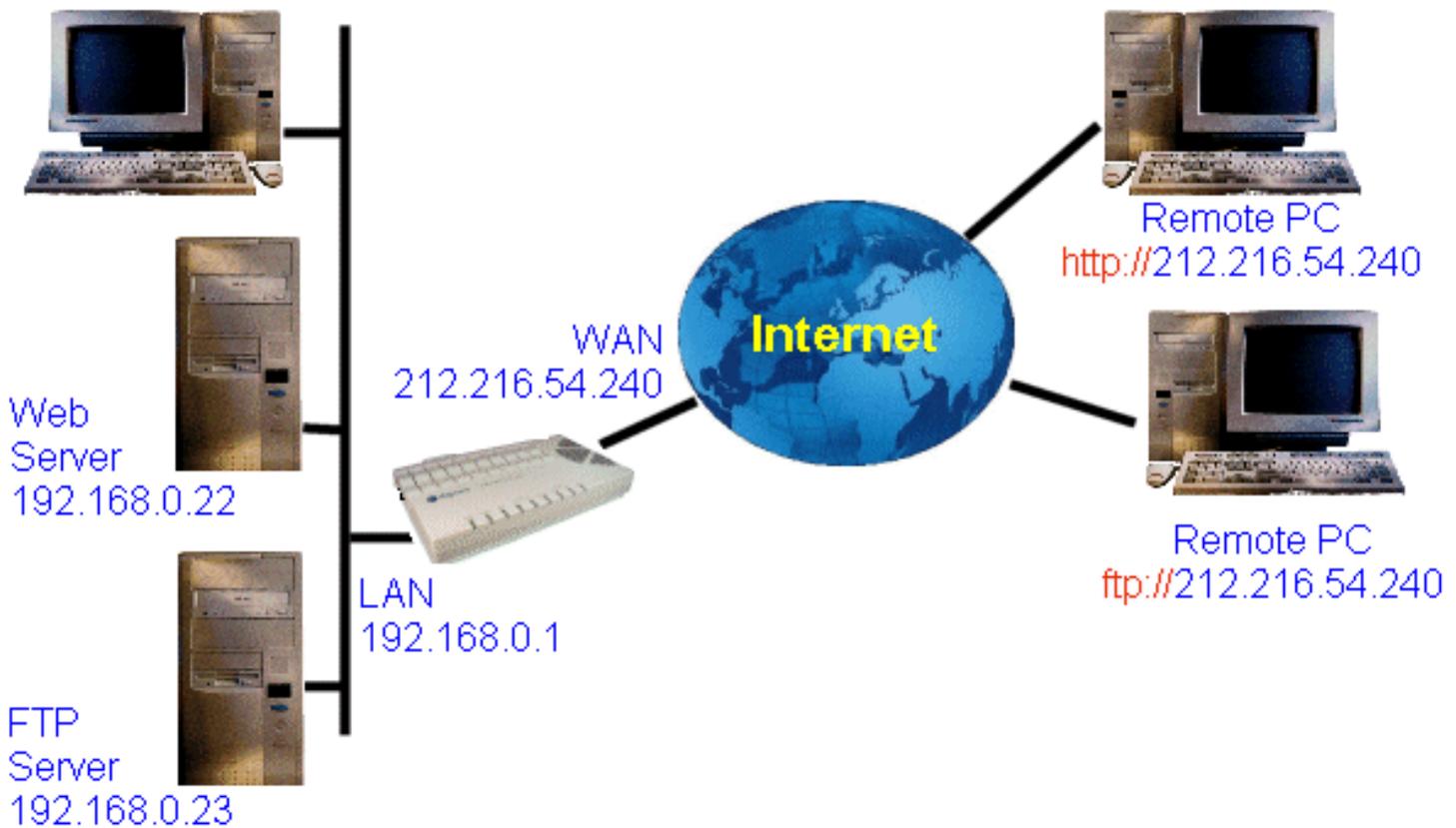
**Virtual Servers**

This feature allows you to make Servers on your LAN accessible to Internet users. Normally, Internet users would not be able to access a server on your LAN because:

- Your Server does not have a valid external IP Address.
- Attempts to connect to devices on your LAN are blocked by the firewall in this device.

The "Virtual Server" feature solves these problems and allows Internet users to connect to your servers, as illustrated below.

**Description - Virtual Servers**



Note that, in this illustration, both Internet users are connecting to the same IP Address, but using different protocols.

**To Internet users, all virtual Servers on your LAN have the same IP Address. This IP Address is allocated by your ISP.**

This address should be static, rather than dynamic, to make it easier for Internet users to connect to your Servers. If using a Static IP Address, it is entered on the "WAN" screen.

# Virtual Servers



Allow access to Servers on your LAN. From the Internet, ALL Servers appear to have the "WAN IP Address" below.

## WAN IP Address

Current IP Address to connect to ALL Virtual Servers: 0.0.0.0

This address is allocated by your ISP. It is better to have a fixed IP Address.

## Virtual Servers

Type of Server	Enable	LAN IP Address
DNS	<input type="checkbox"/>	0 . 0 . 0 . 0
Finger	<input type="checkbox"/>	0 . 0 . 0 . 0
FTP	<input type="checkbox"/>	0 . 0 . 0 . 0
Gopher	<input type="checkbox"/>	0 . 0 . 0 . 0
Mail (SMTP)	<input type="checkbox"/>	0 . 0 . 0 . 0
Mail (POP3)	<input type="checkbox"/>	0 . 0 . 0 . 0
News	<input type="checkbox"/>	0 . 0 . 0 . 0
Telnet	<input type="checkbox"/>	0 . 0 . 0 . 0
Web	<input type="checkbox"/>	0 . 0 . 0 . 0
Whois	<input type="checkbox"/>	0 . 0 . 0 . 0



1. Enable/Disable using the **Enable** checkbox the server you want to export
2. Type the IP address of the computer that will be reachable from the Internet.  
If using DHCP, the LAN IP Address of a PC may change. To solve this problem, use either of these methods:  
Assign a fixed IP Address to the Server PC, ensuring that its IP Address is NOT within the address range allocated by the DHCP Server.  
Reserve an IP Address for the Server PC in the DHCP Server, using the Access Control - PC screen.
3. When finished click **Save**.

## User defined Virtual Servers

<h2>User Defined Virtual Servers</h2>	<p> Define Special-purpose Virtual Servers on your LAN. From the Internet, ALL Servers appear to have the "WAN IP Address" below.</p>
<h3>WAN IP Address</h3>	<p>Current IP Address to connect to ALL Virtual Servers: 0.0.0.0</p> <p>This address is allocated by your ISP. It is better to have a fixed IP Address.</p>
<h3>Select Server</h3>	<p>Name: <input type="text"/> <input type="button" value="Get Data"/></p> <p>Click "Get Data" to see the correct data for the selected server.</p>
<h3>Details</h3>	<p>Name: <input type="text"/> <input type="checkbox"/> Enable</p> <p>IP Address <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Protocol <input type="text" value="UDP"/></p> <p>Internal Port No. <input type="text"/> (Required)</p> <p>External Port No. <input type="text"/> (Optional)</p> <p style="text-align: right;"><input type="button" value="Clear Form"/></p>
<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="List All"/> <input type="button" value="Cancel"/>	

**To Enable a defined Application**

- Select it from the drop-down list
- Click "Get Data"
- Check the Enable checkbox
- Click "Update"

**To Disable a defined Application**

- As above, but uncheck the Enable checkbox.

**To Delete a defined Application**

- Select it from the drop-down list,
- Click "Delete"

**To Modify (Edit) a defined Application**

- Select it from the drop-down list,

- Click "Get Data"
- Make any desired changes
- Click "Update"

### To Create a new Application

- Click "Clear Form"
- Enter the required data, as described below
- Click "Add"

### To List all Applications click "List All"

<b>Enable</b>	Use this to Enable or Disable support for this Server, as re-quired.
<b>Protocol</b>	Select the protocol (TCP or UDP) used by the Server.
<b>Name</b>	Enter a descriptive name to identify this Server entry.
<b>IP Address</b>	The IP Address of the PC on your LAN which is running the Server software.
<b>Internal Port No.</b>	Enter the port number used by the Server to connect to clients.
<b>External Port No.</b>	The port number used by clients when connecting to the Server. This is normally the same as the Internal Port Number. If it is different, this device will perform a "mapping" or "translation" function, allowing the server to use one port address, while clients use a different port address.

### VPN (Virtual Private Networking) Servers

The device supports VPN through PPTP (Peer-to-peer Tunneling Protocol).

- For accessing remote VPN servers no configuration is needed.
- For allowing remote server to access your local VPN servers create a Virtual Server entry for the VPV server as follows:
  - Select *TCP*.
  - Type in a mnemonic name
  - Type in the IP address of the VPN Server.
  - Type in the port numbers used by the VPN application, normally 1723 for internal and external port.

The router is now transparent.

### DMZ - Exposed Computer

This feature, if enabled, allows one (1) computer on your LAN to be exposed to all users on the Internet, allowing unrestricted 2-way communication between the "DMZ" PC and other Internet users or Servers.

This allows connection to special-purpose servers which require proprietary client software, or 2-way user connections such as Video-conferencing, which requires both users to run special software.

- **To allow unrestricted access, the NAT-Firewall in this device is disabled, creating a security risk.**
- **You should use this feature only if the "Special Applications" feature is insufficient to allow an application to function correctly. This feature should be turned ON only when needed, and left OFF the rest of the time.**

<b>DMZ</b>	 Allows one (1) computer to have unrestricted 2-way communication with Internet servers or users.
<b>Enable</b>	<p>Because of the security risk involved in using this feature, it should be activated only when necessary.</p> <p><input type="checkbox"/> Enable DMZ feature</p>
<b>LAN IP Address</b>	<p>Enter the local IP Address of the DMZ device or PC. It is better if this PC has a fixed IP Address, rather than be acting as a DHCP client.</p> <p>LAN IP Address:      <input type="text" value="0"/> <input type="text" value="."/> <input type="text" value="0"/> <input type="text" value="."/> <input type="text" value="0"/> <input type="text" value="."/> <input type="text" value="0"/></p>
<b>WAN IP Address</b>	<p>Current IP Address to connect to the DMZ PC: <code>dport_ip 123.123</code></p> <p>This address is allocated by your ISP. It is better to have a fixed IP Address.</p>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

<b>Enable</b>	Use this to Enable or Disable the DMZ feature. The DMZ feature should be disabled when not required.
<b>LAN IP Address</b>	<p>Enter the IP Address of the PC on your LAN which will become the "DMZ" PC.</p> <p>If using DHCP, the LAN IP Address of a PC may change. To solve this problem, you can use either of these methods:</p> <ul style="list-style-type: none"> <li>● Assign a fixed IP Address to the DMZ PC, ensuring that its IP Address is NOT within the address range allocated by the DHCP Server.</li> <li>● Reserve an IP Address for the DMZ PC in the DHCP Server, using the Access Control - PC screen.</li> </ul>
<b>WAN IP Address</b>	<p>This is the IP Address Internet users must use to connect to the "DMZ" PC.</p> <p>This IP Address is allocated by your ISP. It is better if you are using a fixed IP Address, so that it never changes. This will make it easier for Internet users to connect to you. If using a Static IP Address, it is entered on the "WAN" screen.</p>

Click **Save** for activating the changes made.



---

## Access Control

- [Overview](#)
  - [Security Groups](#)
  - [PC - Workstations](#)
  - [Administrator Defined - Filters](#)
- 

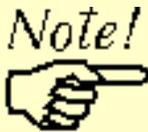
### Overview

The Access Control feature allows administrators to restrict Internet Access by individual workstations. The process uses "Packet Filtering" to block or discard data packets. You can apply the pre-defined filters, and optionally define your own filters.

By default, filtering is disabled; no packets are blocked or discarded.

#### To use the Access Control feature:

1. Set the desired restrictions on the "Everyone" group, by selecting this group and clicking "Setup". By default, all PCs are in the "Everyone" group unless explicitly moved to another group.
2. Set the desired restrictions on the other groups ("Group 1", "Group 2", etc) as needed.
3. For each Workstation you wish to move from the "Everyone" group, enter their data and assign them to the desired group.



**You can limit Internet access for ALL PCs without entering ANY workstation data. Simply apply the desired restrictions to the "Everyone" group.**

---

### Security Groups

<h2>Security Groups</h2>	<p> Set restrictions on each Security Group. The "Everyone" Group should be the MOST restrictive Group.</p>						
<h2>Security Group</h2>	<p>Select Group: <input type="text" value="Everyone"/> <input type="button" value="Get Data"/></p> <p>Click "Get Data" to see correct data for selected group.</p>						
<h2>Access Rights</h2>	<p>Internet Access for this Group:</p> <p><input checked="" type="radio"/> No restrictions</p> <p><input type="radio"/> Block all Access</p> <p><input type="radio"/> Use Packet Filter Table below</p>						
<h2>Packet Filter Table</h2>	<p>Check the items you wish to block (discard).</p> <table border="1"> <thead> <tr> <th data-bbox="509 772 776 888">Applications to Block</th> <th data-bbox="781 772 1442 888">TCP Packets to Discard</th> </tr> </thead> <tbody> <tr> <td data-bbox="509 894 776 1423"> <input type="checkbox"/> Archie  <input type="checkbox"/> DNS  <input type="checkbox"/> E-Mail  <input type="checkbox"/> FTP  <input type="checkbox"/> Gopher  <input type="checkbox"/> News  <input type="checkbox"/> SNMP  <input type="checkbox"/> Telnet  <input type="checkbox"/> TFTP  <input type="checkbox"/> WWW         </td> <td data-bbox="781 894 1442 1423"> <div data-bbox="786 898 1045 1035" style="border: 1px solid black; padding: 2px;">           6667 Chat            79 Finger            7070 Raudio         </div> <p>Select items to block. Created on "Filters" screen</p> <thead> <tr> <th data-bbox="781 1125 1442 1192">UDP Packets to Discard</th> </tr> </thead> <tbody> <tr> <td data-bbox="781 1199 1442 1417"> <div data-bbox="808 1203 873 1339" style="border: 1px solid black; height: 65px; width: 40px;"></div> <p>Select items to block. Created on "Filters" screen</p> </td> </tr> </tbody> </td></tr></tbody></table> <p style="text-align: center;"><input type="button" value="Clear Form"/></p>	Applications to Block	TCP Packets to Discard	<input type="checkbox"/> Archie <input type="checkbox"/> DNS <input type="checkbox"/> E-Mail <input type="checkbox"/> FTP <input type="checkbox"/> Gopher <input type="checkbox"/> News <input type="checkbox"/> SNMP <input type="checkbox"/> Telnet <input type="checkbox"/> TFTP <input type="checkbox"/> WWW	<div data-bbox="786 898 1045 1035" style="border: 1px solid black; padding: 2px;">           6667 Chat            79 Finger            7070 Raudio         </div> <p>Select items to block. Created on "Filters" screen</p> <thead> <tr> <th data-bbox="781 1125 1442 1192">UDP Packets to Discard</th> </tr> </thead> <tbody> <tr> <td data-bbox="781 1199 1442 1417"> <div data-bbox="808 1203 873 1339" style="border: 1px solid black; height: 65px; width: 40px;"></div> <p>Select items to block. Created on "Filters" screen</p> </td> </tr> </tbody>	UDP Packets to Discard	<div data-bbox="808 1203 873 1339" style="border: 1px solid black; height: 65px; width: 40px;"></div> <p>Select items to block. Created on "Filters" screen</p>
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UDP Packets to Discard							
<div data-bbox="808 1203 873 1339" style="border: 1px solid black; height: 65px; width: 40px;"></div> <p>Select items to block. Created on "Filters" screen</p>							

|  |  |

### To Set or Change restrictions for a Security Group:

1. Select the group from the drop-down list. Note that the Security groups are pre-named "Everyone", "Group 1", "Group 2", "Group 3", and "Group 4". These names cannot be changed.
2. Click the **Get Data** button to view the selected group's data. Use **Clear Form** for deleting alla data.

### To Assign Workstations to a Security Group

- All Workstations are automatically in the "Everyone" group.

- Use the [PC - Workstations](#) screen to move them to an-other group if required.
- Type in the desired data as described in the table below and click **Save** when done.

## Data for each Group

Access Rights	
<b>No restrictions</b>	No packets are blocked. Use this to create an "Unlimited Access" group, or to temporarily remove restrictions.
<b>Block all Access</b>	Groups members cannot access the Internet at all. Use this to create the most restrictive group.
<b>Use Packet Filter Table Below</b>	Use this to define intermediate levels of access. Using the <b>Packet Filter table</b> gives you fine control over Internet access. Simply select the items you wish to block. You can choose from the pre-defined filters in the Applications to Block column, or your own filters in the TCP Packets to Discard and UPD Packets to Discard column.
Packet Filter Table	
<b>Applications to Block</b>	Any items checked will be blocked. Users will not be able to use the application.
<b>TCP Packet to Discard</b>	This lists any TCP filters you have defined on the <a href="#">Administrator Defined Filters</a> screen. If no filters have been defined, this is empty. Multiple items can be selected (or deselected) by holding down the Ctrl key while selecting items. Selected items can NOT be accessed by members of this group.
<b>UDP Packet to Discard</b>	Like above but for UDP packets.

## PC - Workstations

<h1>PCs</h1>	<p> Define PCs on your LAN, and assign them to security Groups. Any PCs not defined here are in the "Everyone" Group.</p>
<h2>Select PC</h2>	<p>PC Name: <input type="text" value="client1"/> <input type="button" value="Get Data"/></p> <p>Click "Get Data" to see correct data for selected PC.</p>
<h2>Details</h2>	<p>Name: <input type="text" value="client1"/></p> <p>Network Adapter Address: <input type="text" value="00a0a2005cd0"/></p> <p>Do not use any separators (: or -) in this address.</p> <p><input type="checkbox"/> Reserve entry in DHCP Table</p> <p>Reserved IP Address <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/></p> <p>Security Group <input type="text" value="Everyone"/></p> <p style="text-align: right;"><input type="button" value="Clear Form"/></p>
<p style="text-align: center;"> <input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Update"/> <input type="button" value="List All"/> <input type="button" value="Cancel"/> </p>	

This list shows all workstations (PCs) which have been defined.

It is only necessary to define workstations in the following situations:

- To assign the workstation to a particular security group.
- To reserve an IP Address for this PC (or device), so that the DHCP Server function in Tintoretto Wave will always allocate the same IP Address to this device, and never assign the reserved IP Address to any other device.

#### To Add a New Workstation:

- Ignore the drop-down box, click the **Clear Form** button, and enter the [PC - Workstation details](#) in the fields provided.
- Click **Add** when finished.

#### To Delete an Existing Workstation:

- Select the Workstation from the drop-down box
- Then click the **Delete** button.

#### To Change an Existing Workstation's Details:

- Select the Workstation from the drop-down box
- Click **Get Data** to view their information, then change any fields you wish.
- Click **Update** when finished.

**To Generate a List of all Workstations:**

Just click on the **List All** button.

**Workstation Data**

<b>PC Name</b>	Enter a name to identify this PC.
<b>Security Group</b>	Select the security group for this PC. If you only wish to reserve an IP Address, and are not using the security (access control) features, simply leave this at "Everyone".
<b>Network Adapter Address (MAC Address)</b>	Hardware address for this PC. You can use the Windows "Winipcfg" program or your LAN management program to find this address.
<b>Reserve IP Address in DHCP Table</b>	Check this if you wish to reserve an IP address for this PC. This is useful if you have to provide the IP Address for other programs or users.  If this is left unchecked, the following entry can be ignored.
<b>Reserved IP Address</b>	This relates to the entry above. Enter the reserved address here. This <b>MUST</b> be within the range used by the DHCP server (set on the Device - Internal LAN Port screen).

**Administrator Defined Filters**

# Filters



Create additional filters by defining packets to be Filtered Out. This is optional.

## TCP Filters

Name		Port No.	Name		Port No.
1.	Chat	6667	6.		0
2.	Finger	79	7.		0
3.	Raudio	7070	8.		0
4.		0	9.		0
5.		0	10.		0

## UDP Filters

Name		Port No.	Name		Port No.
1.		0	6.		0
2.		0	7.		0
3.		0	8.		0
4.		0	9.		0
5.		0	10.		0

This screen allows you to define packet filters. When you define security groups, on the "Security Groups" screen, you can select from any filters defined here, as well as the pre-defined filters.

### Administrator defined Filters

#### TCP Packets

**Name**

Enter a descriptive name for this entry.

**Port No.**

Enter an integer representing the TCP Port Number for this type of packet.

#### UDP Packets

**Name**

Enter a descriptive name for this entry.

**Port No.**

Enter an integer representing the UDP Port Number for this type of packet.






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## [Troubleshooting](#)

- [Overview](#)
  - [Problems](#)
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### Overview

- This document covers some common problems that may be encountered while using Tintoretto Wave and some possible solutions to them.
  - If you follow the suggested steps and Tintoretto Wave still does not function properly, contact your supplier for further advice.
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### Problems

<b>Problem 1:</b>	Cannot access Tintoretto Wave's configuration.
<b>Solution 1:</b>	<p>Check the following:</p> <ul style="list-style-type: none"> <li>● Tintoretto Wave is properly installed, LAN connections are OK, and it is powered ON.</li> <li>● Ensure that your PC has the TCP/IP network protocol installed. In Windows, this is done by using <i>Control Panel-Network</i>. to check that you have a TCP/IP entry for your network card. If you don't, click the <i>Add</i> button, then choose <i>Protocol - Microsoft - TCP/IP - OK</i> to add this entry. You then need to restart your PC.</li> <li>● Ensure that your PC and Tintoretto Wave are on the same network segment. (If you don't have a router, this must be the case.)</li> </ul>
<b>Problem 2:</b>	When I enter a URL or IP address I get a time out error.

<b>Solution 2:</b>	<p>A number of things could be causing this. Try the following troubleshooting steps.</p> <ul style="list-style-type: none"> <li>● If this is first time you have used your browser, ensure that your workstations IP settings are correct, including IP address, default gateway and DNS.</li> <li>● Ping Tintoretto Wave. Use the "Run" command to enter the following command: <ul style="list-style-type: none"> <li><b>Ping xxx.xxx.xxx.xxx</b></li> <li>Where xxx.xxx.xxx.xxx is the IP address assigned to Tintoretto Wave.</li> </ul> </li> <li>● If the ping command fails, check that Tintoretto Wave is connected and ON. If it is connected and on, there is a problem with your LAN.</li> <li>● On the <i>Quick Setup</i> screen, check that <i>Enable Internet Access</i> is checked.</li> <li>● Check the <i>Status</i> screen, and examine the Log. For details of the Log messages refer to <a href="#">Connection Log</a>.</li> <li>● Check if the xDSL modem is powered on and correctly connected.</li> <li>● Check your "Proxy Server" settings on your PCs. <ul style="list-style-type: none"> <li>○ Tintoretto Wave is NOT a Proxy Server; PCs do not require "Proxy Server" settings to use it.</li> <li>○ If you have Proxy Server on your local LAN, you should turn it Off, and disable the "Proxy Server" settings in your PC applications.</li> <li>○ If your ISP has a Proxy Server, follow the instructions provided by the ISP.</li> </ul> </li> </ul>
<b>Problem 3:</b>	Some applications do not run properly when using Tintoretto Wave
<b>Solution 3:</b>	<p>The processes the data passing through it, so it is not transparent.</p> <p>The <i>Internet Application</i> screen has 2 features designed to assist with running non-standard applications:</p> <ul style="list-style-type: none"> <li>● Special Applications</li> <li>● DMZ - Exposed Computer</li> </ul> <p>You should use the <i>Special Applications</i> feature if possible. If necessary, additional applications can be defined, using data provided by the service provider. Remember that at any time, only one (1) user can use a particular Special Application.</p> <p>If this cannot be made to work, use the <i>DMZ - Exposed Computer</i> feature. <b>Warning: This is a security risk, so should only be used if essential.</b></p>
<b>Problem 4:</b>	My PC can't locate the Tintoretto Wave

**Solution 4:**

Check the following.

- Your PC is set to Infrastructure Mode.
- The wireless channel used matches the wireless channel on the Access Point.
- The SSID on your PC and the Wireless Access Point are the same. Remember that the SSID is case-sensitive. So, for example "Workgroup" does NOT match "workgroup".
- Both your PC and the Wireless Access Point must have the same setting for WEP. The default setting for the Tintoretto Wave is disabled, so your wireless station should also have WEP disabled.
- If WEP is enabled, the key tables must match.
- If the Wireless Station access permission on the Tintoretto Wave's Wireless screen is set to Only allow access if on this list, then each Wireless station must have its address correctly entered.
- To see if radio interference is causing a problem, see if connection is possible when close to the Wireless Access Point. Remember that the connection range can be as little as 100 feet in poor environments.

**Problem 5:**

Wireless connection speed is very slow.

**Solution 5:**

The wireless system will connect at the highest possible speed, depending on the distance and the environment. To obtain the highest possible connection speed, you can experiment with the following:

- Access Point location.  
Try adjusting the location and orientation of the Access Point.
- Wireless Channel  
If interference is the problem, changing to another channel may show a marked improvement.
- Radio Interference  
Other devices may be causing interference. You can experiment by switching other devices Off, and see if this helps. Any "noisy" devices should be shielded or relocated.
- RF Shielding  
Your environment may tend to block transmission between the wireless stations. This will mean high access speed is only possible when close to the Access Point.