Wireless Router

Installation guide

Telefónica

This guide details about the start up process for your Internet connection. You will be able to enjoy your connection in an easy, simple and quick way. Please follow the guide instructions step by step.
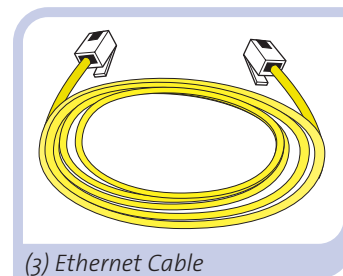
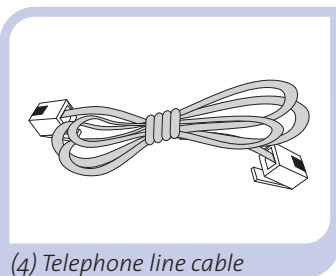# Package Contents

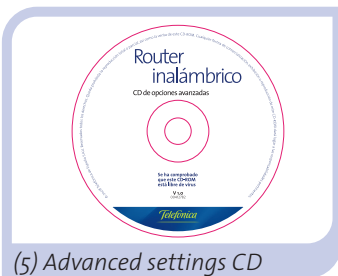(1) Wireless Router

(2) Power Adapter

(3) Ethernet Cable

(4) Telephone line cable
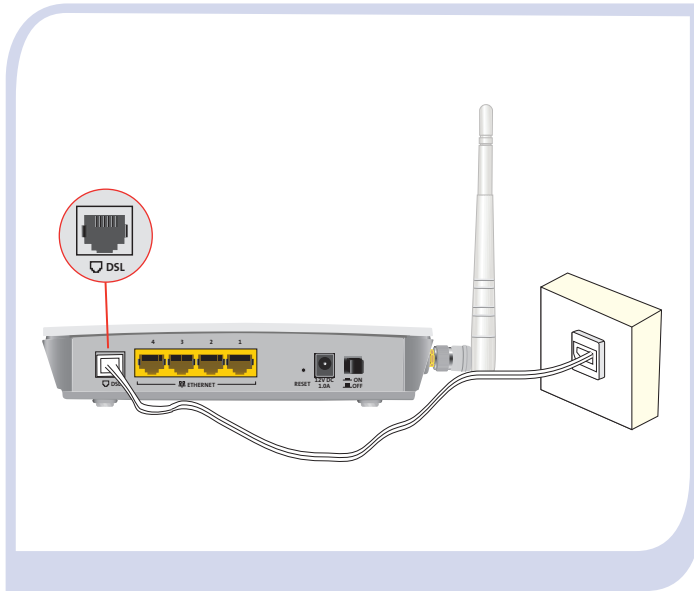

(5) Advanced settings CD

(6) Warranty card

For further information please refer to the User's manual on the Advanced Settings CD, Section 2, or the Glossary Section in this Guide.

Start using your service...

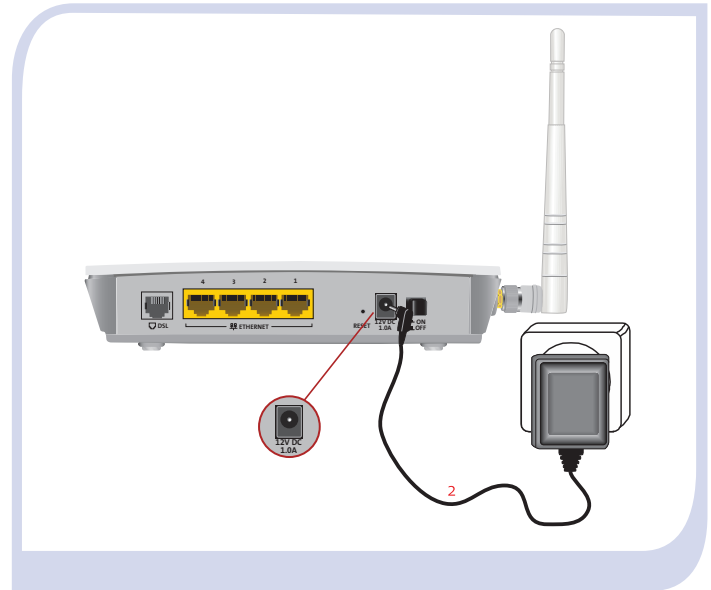## 1 Telephone line connection

Check that the telephony line cable is connected to the telephone socket and to the router connector labeled as **DSL**.

2 Power adapter connection

Plug the power adapter (2) into the mains supply and into the **12V DC 1.0A** connector of the router.

For further information please refer to the User's manual on the Advanced Settings CD, Section 3.2.

4

3 Switching the Router on

Turn the router on by putting the switch into the **ON** position.
Wait for a few minutes until the LEDs shine as shown below.

ON
OFF

The routers provided by **Telefónica** are optimised so that they can establish the connection with Internet without any need for installations or configurations.

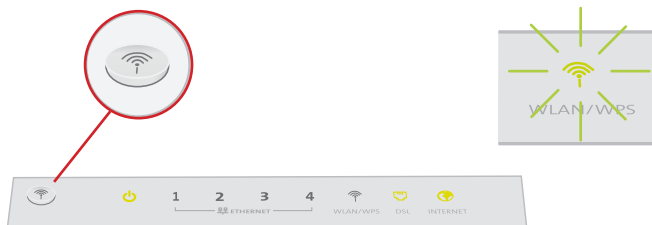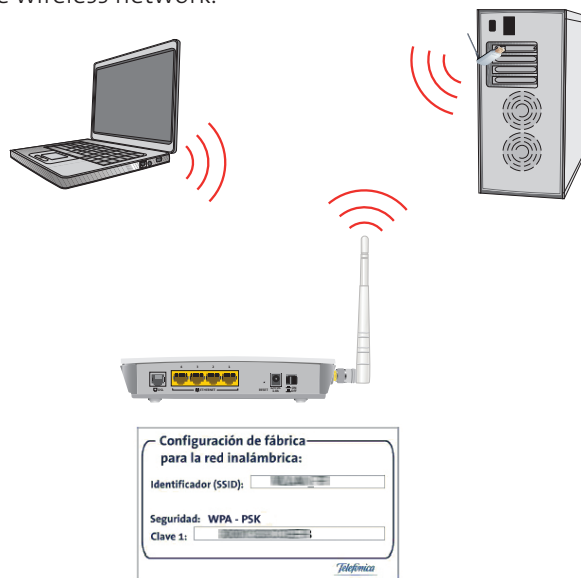| Indicators	Current Status	Description
⏻	ON (green)	Status of the power supply.
Ethernet	OFF	Status of the Ethernet connection.
WLAN/WPS	OFF	Status of the wireless network.
DSL	ON (green)	Connectivity established with the exchange. The indicator will blink in green while the connection is being established.
INTERNET	ON (green)	Status of the Internet connection.

4 Connecting the computer to the router. Two options are available

You may either connect your computer to the router using an Ethernet cable if they are sufficiently close to each other or by means of a wireless network. Furthermore, you can simultaneously have certain items of equipment connected to the router using the Ethernet cable and others as portable through the wireless network.

A. Connection using wireless network

You can use the wireless network as long as your computer is equipped with a wireless adapter installed or this is integrated into your equipment.
The first step will be to enable the wireless network for your router. This is done by pressing the button located at the front of the router for 3 or 4 seconds. The **WLAN/WPS** indicator will light up in green and will blink when navigating.

WLAN/WPS

1 2 3 4 ETHERNET WLAN/WPS DSL INTERNET

Configuración de fábrica para la red inalámbrica:

Identificador (SSID):

Seguridad: WPA - PSK
Clave 1:

Telefónica

The next step is to configure the computers on your wireless network in accordance with your router's wireless parameters.

The configuration parameters by default for your wireless network are shown on the label at the bottom of your router.

1. If you are equipped with an external wireless device (PCMCIA or USB adapter), install it with the aid of the CD that is provided with it. If you have a wireless device that is already integrated into your equipment, make sure that it is enabled with the aid of your operating system.

2. When configuring your wireless device in Windows XP SP2 or Vista, **you can** use the wireless client management application by pressing with the right-hand button on the wireless network connection icon on the system tray (next to the clock) and selecting "View available wireless networks". For other operating systems refer to the wireless client assistance manual.
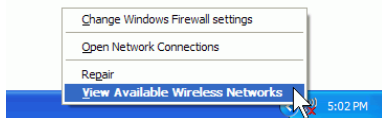
3. Search the available wireless networks. You can update this list with the button "*Refresh network list*".
Select the network whose identifier (SSID) is the one that appears on the router label and press on "Connect".
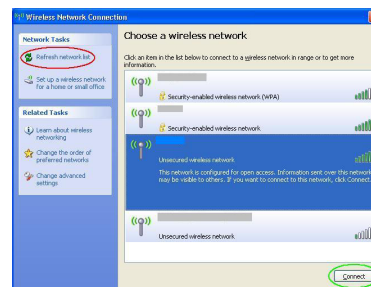
4. Enter the security key that appears on the router label.

IMPORTANT. The wireless security key for the router is of the WPA/PSK type and its format is alphanumerical. Make sure you enter that security key exactly as it appears on the label.
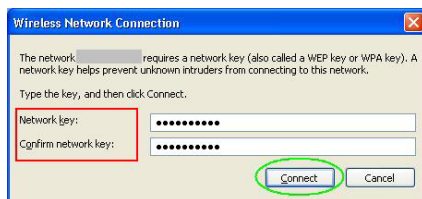
5. Connect to the wireless network using the *Connect* button.

6. Check to make sure that the wireless network connection icon for the system tray indicates that the connection has been correctly established.
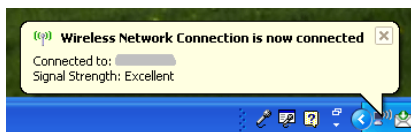
B. Connection using Ethernet cable

Connect the yellow Ethernet cable (3) to the Ethernet card on the PC and to one of the router's connectors labelled as **ETHERNET 1X a 4X**
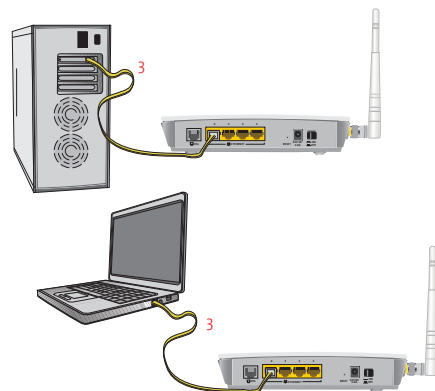
Switch the PC on. The **ETHERNET** indicator will light up in green after a few seconds. This LED will blink when transfering data.

For further information please refer to the User's manual on the Advanced Settings CD, Section 3.4.

8

Congratulations, now you can access Internet !

Open your browser, go to the web address www.telefonica.es and start surfing the net. Should you not be able to access, please see refer to the Solutions to frequent problems in this guide.

Activate your free e-mail accounts and your website with the Internet access service contracted.
Once you have accessed www.telefonica.es, select the option "Activar correo". After typing in the initial *identificador (user)* and *contraseña (password)* provided in the letter with the service dat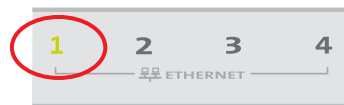a or the one obtained calling 900 50 20 10 from the telephone line where you have installed the service, you will access a website where you can publish your personal web pages.

Protect your PC
Once you are connected to the service we strongly recommend you to protect your PC against Internet viruses or attacks. If you wish to do so, you can contract these services (Antivirus PC, Anti-Intrusos PC, Pack Seguridad PC, etc.) at www.telefonica.es, calling 1004 or through your usual channel.

Advanced Settings CD

The CD is not required to set up your connection.

On the CD you will be able to find further help in response to any needs that might arise regarding your Internet connection.

Agente:
An Advanced Configuration Tool which will allow you to carry out some advanced configuration tasks, such as opening ports, modifying the access password, etc.

Asistente Técnico:
A support tool which will enable you to detect and solve problems concerning your Internet connection.

Documentación:
It includes more detailed information about the additional tools and certain aspects of your Internet connection. This documentation is in Spanish language.
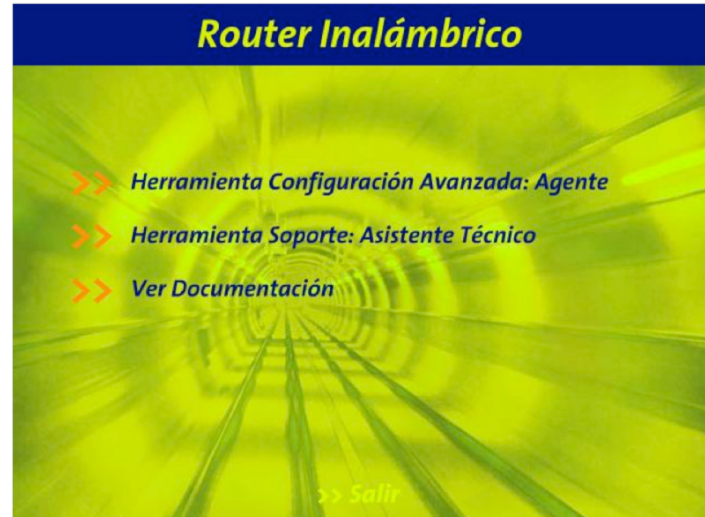
Solutions to frequent problems

PROBLEM	REASON	SOLUTION
The Ethernet LED does not light up.	The Ethernet cable is not correctly connected. (This is only a problem if you have decided to connect by cable and not by wireless network).	Verify that the Ethernet cable is correctly connected to the Ethernet connector and to the Ethernet card of your desktop PC or laptop computer (See Step 4 in the section "Start using your service…" in this guide).
The DSL LED does not light up.	The phone line cable is not correctly connected.	Verify that the phone line cable is correctly connected to the DSL connector and to the phone socket (See Step 1 in the section "Start using your service…" in this guide).
I cannot access Internet	There is a firewall installed in your computer which prevents the connection to Internet.	Verify that no firewall that may hinder the connection to the Internet is installed. See Appendix I of the User's Guide contained in the Advanced Settings CD.
	The TCP/IP protocol is not correctly installed for the network adapter used.	You must make sure that the TCP/IP protocol is correctly installed for the network adapter that the router is to be connected to. Refer to the Guide on the Ethernet card and TCP/IP protocol contained in the Advanced Settings CD.
	Sometimes the computer does not receive the IP address, the gateway or the DNS server data correctly through DHCP, owing to the fact the computer and the router are not simultaneously turned on.	We recommend that you reset both devices, first of all the router and then the computer.

Solutions to frequent problems (cont.)

PROBLEM	REASON	SOLUTION
I do not have an icon for the wireless client.	Your wireless client is not correctly installed, set up or configured.	Make sure that your wireless client is correctly installed and enabled. More information is contained in the manual for the device itself.
The client management application does not show the network for my router (the one that appears on the label) as being one of the available networks.	The wireless network is disabled on the router.	Make sure that the wireless network for your router is enabled: the WLAN/WPS indicator is lit up in green.
I cannot connect to the router wireless network.	Your network identifier (SSID) is not being correctly indicated when you connect to it.	Check to make sure that you are using the same network identifier (SSID) throughout the network. *Remember that it is case sensitive, i.e. a distinction is made between capital and small letters.*
	You have not correctly configured the encryption used on your wireless network when connecting to it.	Check to make sure that you are using the same type of encryption and the same key for all the network elements. Remember that if you are using WEP encryption, you will have to select and configure the key number 1 in the configuration for wireless clients.
	The TCP/IP properties of your wireless client are not configured to receive IP via DHCP.	Make sure that the TCP/IP properties of the network adapter for your wireless client are configured to receive the IP dynamically (via DHCP). Refer to the assistance given in your operating system.

Solutions to frequent problems (cont.)

PROBLEM	REASON	SOLUTION
The connection with the wireless network is cut off frequently. The quality of the connection is not good.	Interference is being caused by other existing wireless networks.	If there is any interference affecting that channel, select a different one. If there are other wireless networks operating in the same zone, it is recommended that the networks be configured with a separation of 4 or 5 channels. For example, if there is a wireless network operating on channel 6 and we wish to install an additional wireless network, we must select channel 1, 2, 10, 11, 12 or 13. If this is not possible, select the one that causes the least impact (the least inundated channel, that is to say, the one with the lowest number of wireless networks.
	The wireless network signal is weak because the router is located in a place that is not very accessible or at a great distance.	Put the ADSL router in an unobstructed place. If there are network coverage problems, it is recommended that the antenna be moved to a different position. Remember that it is advisable to make sure that there are not many obstructions between the ADSL router and the wireless clients.

"See the User's Guide in the Advanced Setting Options CD for further details.
If you cannot solve the problem, please refer to the following section, which contains information about the Customer Care Service".

Customer Care

The customer care service is available via telephone as well as via Internet. For further information, please refer to Chapter 6 in the User's Manual.

All the information about DSL can be found in the "Todo ADSL" section at telefonica.es:
www.telefonica.es/adsl

Telefónica Technical Customer Care Centres

Home Users: **902 357 000**
Small and Medium Enterprises and Professionals: **902 357 022**

Customer Care to execute the equipment warranty: **902 430 233**

Additional Information

TELEFÓNICA DE ESPAÑA, S.A.U. INFORMA

Deseamos agradecerle la confianza depositada en Telefónica de España al haber adquirido uno de nuestros equipos y le informamos que para cualquier aclaración, consulta o reclamación, puede llamar de forma gratuita a:

- **Línea de Atención Personal (1004)**
- **Centro de Atención para Profesionales y Empresas (900 10 10 10)**
- **Centro de Atención de Empresas (900 12 09 00)**

Donde será atendido por nuestros asesores, o si Ud. lo prefiere, visite la página comercial de Telefónica: www.telefonica.es.

Para obtener información sobre el Servicio Postventa, consulte la Tarjeta de Garantía del Equipo.

Por último indicarle que, para reclamaciones por escrito referidas a esta venta, puede dirigirse a Telefónica de España S.A.U, Gran Vía 28, 28013 Madrid.

ENVIRONMENTAL RECYCLING

Do not dispose of this ADSL router with your normal household waste. Ask your local authorities about the opportunities that are available for disposing of it correctly so that no damage is caused to the environment. Always comply with the applicable legal standards currently in force.

All offenders will be penalised or otherwise punished by Law.

Cardboard boxes, the plastic part of the packaging and the parts that constitute the device can be recycled in compliance with the standards currently in force in Spain where recycling is concerned.

The cross symbol on the container that is printed on the device, means that when the equipment has reached the end of its useful service life it must be taken to a special collection centre and that it must be processed separately from household waste.

ZyXEL

DECLARATION OF CONFORMITY

Company Name:	ZyXEL Communications, S.A.
Address:	C/ Arte, 21, 5ª
	28033 Madrid
	Phone: 902195420 Fax: 913005345
Identification Number (CIF):	A-62475710

Declares under its own responsability that the

Device Type: Router
Manufactured by: ZyXEL Communications Corp.
In: Taiwán
Brand: Telefónica
Model: P870HW-51Av2

Complying with the standards listed below:

- ITU.T G.993.1 VDSL1
- ITU.T G.993.2 VDSL2
- VDSL band plan, Annex A, Annex B, 997, 998
- IEEE 802.11b/g
- IEEE 802.3 10BaseT Ethernet
- IEEE 802.3u 100BaseTx Ethernet

In accordance with the next international directives refered to telecommunication devices:

- EN 55022:1998+A1: 2000+A2: 2003
- EN 55024:1998+A1: 2001+A2: 2003
- EN 61000-3-2: 2000
- EN 61000-3-3: 1995+A1: 2001
- Safety EN 60950-1: 2001

According with the 89/336/EEC, 92/31/EEC, 93/68/EEC, 99/5/EEC and LVD 73/23/EEC specs.
And fully complying with the 1995/5/EC directive Annex III.

Date, May 25th 2009

ZyXEL
Communications, S.A.
p.p.

Firma: José Seger Segura
Country Manager

CE0979 ⚠ Este equipo está preparado para su conexión a la red analógica de Telefónica de España, S.A.U., con acceso al servicio de Banda Ancha y su uso está autorizado exclusivamente en España.

Glossary

ADSL:
Asymmetric Digital Subscriber Line. It is a digital line for accessing Internet at high speed.

Antivirus:
An application that detects and removes any computer virus and other malicious programs.

DHCP (Dynamic Host Configuration Protocol):
A protocol that allows the hosts of a network to obtain the IP configuration settings automatically.

DNS (Domain Name System):
Domain Name Server. The server translates a domain name (the name of a machine) into its corresponding IP address.

Encryption or cryptography:
The science that enables one to encode and decipher information using techniques that make it possible to exchange messages in a safe and secure way, because they can only be read by the persons to whom they are addressed.

Ethernet Cable:
A cable that is used to transmit data at high speed in Local Area Networks (LAN).

Firewall:
A hardware or software element that is used in a computer network to control and manage the network traffic, either allowing it or rejecting it, accor ing to the network policies defined by the organisation that manages the network. It may block the establishment of the connection to the Internet.

Fixed / Dynamic IP Addressing:
It indicates how Telefónica assigns the IP address to your line. If every time that your router starts a session it can be assigned a different IP address, this indicates that your service includes dynamic addressing, which is the default type of addressing. However, if you are always assigned the same IP address, then your IP addressing service is fixed or static.

PCMCIA:
It is a hardware element that is normally used in laptop computers to expand their capacities. The most common case is that of wireless network adapters, which are of this type.

Ports:
Physical or logical connections for sending or receiving data. It allows a program to communicate via the network.

Socket:
A plug that is usually installed on the wall that enables the telephone cable to be connected.

SSID (Service Set Identifier):
A code included in all the packages of a wireless network so that they can be identified as being part of that network. An SSID thus enables one to make a distinction between the different wireless networks that exist.

Glosario

TCP/IP (Transmission Control Protol/Internet Protocol):
It is a set of network protocols upon which the Internet is based and which allow data to be transmitted between computer networks.

VDSL (Very High bit-rate Digital Subscriber Line):
Very high bit rate Digital Subscriber Line. It is a digital line for accessing Internet at high speed.

Web Space:
It is a service that enables the user to offer his or her own web sites or documents so that they will be accessible on the Internet.

Web Browser or Web Explorer:
It is an application that enables the user to access and view hypertext document, commonly in HTML format, that is available on the Internet.

WEP Key:
A key that is used to authenticate a user who connects to a wireless network that uses this type of encryption (WEP). It permits encrypting of sent data.

Wireless Client:
A hardware or software element that is used to connect to a network of computers without any kind of cable being used for the purpose.

Telefónica