LINKSYS®
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IP Telephony System

VoIP
Voice

Quick Installation

CISCO SYSTEMS
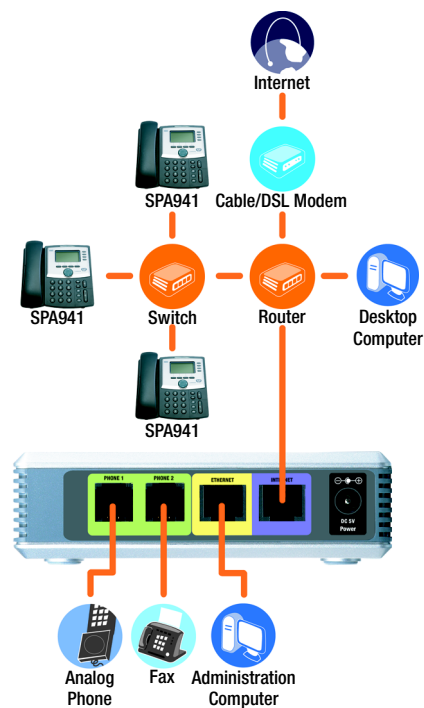
Model No. **SPA9000**

Package Contents

- IP Telephony System
- Power Adapter
- RJ-45 Ethernet Cable
- Quick Installation

Before You Begin

For first-time installation of the System, Linksys strongly recommends that you run the Setup Wizard, which you can download from *www.linksys.com*. For advanced users, you may follow the instructions in this Quick Installation.

Make sure you have the following:

- IP Telephony System

- One or more Internet phones (for example, Linksys SPA-family IP Phones, model number: SPA941)

- A router and cable/DSL modem (or gateway)

- One or more Ethernet network switches (so you can connect Internet phones or computers)

- At least one active Internet phone service account and its settings if you want to make external calls

- An active Internet connection if you want to make external calls

- At least one computer for configuration of the System and Internet phones

- Two or more Ethernet network cables

- Analog telephones or fax machines (optional)

A Typical Scenario

Internet
SPA941 Cable/DSL Modem
SPA941 Switch Router Desktop Computer
SPA941

Analog Phone Fax Administration Computer

NOTE: For best results, use a switch that offers QoS (Quality of Service) and full wire-speed switching. QoS enables the switch to give top priority to voice traffic, while full wire-speed switching lets it forward packets as fast as your network can deliver them. The next best choice is a QoS (Quality of Service) switch.

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1 Install the IP Telephony System

A Plug an analog telephone into the Phone 1 port of the System. (optional)

B If you have a second analog telephone or fax machine, plug it into the Phone 2 port. (optional)

C Connect an Ethernet network cable to the Internet port of the System. Connect the other end to one of the Ethernet ports on your router.

D Connect a different Ethernet network cable to the Ethernet port of the System. Then connect the other end to the computer you will use to manage the System (this will be the administration computer).

E Connect the included power adapter to the Power port of the System, and then plug the power adapter into an electrical outlet.

F Launch the web browser on the administration computer.

G Enter **192.168.0.1/admin/voice/advanced** in the *Address* field. Press **Enter**.

A
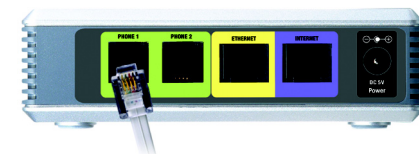
IMPORTANT: Do not connect the Phone port to a telephone wall jack. Make sure you only connect a telephone or fax machine to the Phone port. Otherwise, the System or the telephone wiring in your home or office may be damaged.

C

D

E
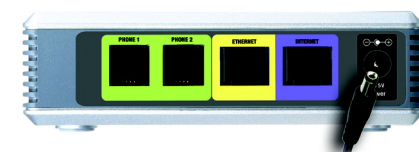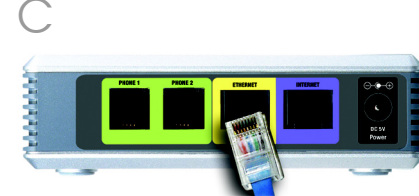
NOTE: **192.168.0.1** is the default local IP address of the System.

H The *Voice - Info* screen will appear. Click the **SIP** tab.

I In the PBX Parameters section, select **WAN** for the Proxy Network Interface.

J Click **Submit All Changes**.

K The *Voice - Info* screen will appear. Click the **Router** tab.

L Click the **WAN Setup** tab.

M For the Connection Type, select **Static IP**.

N In the Static IP Settings section, complete the following fields:

Static IP - Enter a static IP address appropriate for your network. Write this down; you will use it later.

NetMask - Enter the subnet mask of your router.

Gateway - Enter the local IP address of your router or gateway.

I

M
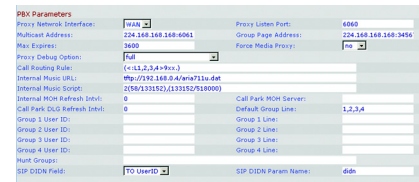
NOTE: Make sure your router will not assign the System's IP address to any other device. For example, you can assign an IP address outside of your router's DHCP IP address range; however, it must be within the router's subnet range.

For information about IP addressing, refer to the router's documentation.

O In the Optional Settings section, complete the *Primary DNS* field.

Primary DNS - Enter the DNS IP address of your router.

P In the Remote Management section, select **yes** from the *Enable WAN Web Server* drop-down menu.

Q Click **Submit All Changes**.

R The *Router - Status* screen will appear. Verify that the following settings match your entries:
- WAN Connection Type - Static IP
- Current IP
- Current NetMask
- Current Gateway
- Primary DNS

Proceed to the next section.

A Connect an Ethernet network cable to one of the Ethernet ports on your router. Then connect the other end of the cable to an Ethernet port on a network switch.

B Connect the switch's power adapter to its power port, and then plug the power adapter into an electrical outlet.

C Connect an Ethernet network cable to an Internet phone. Then connect the other end to one of the Ethernet ports on the switch.

(If the Internet phone has been used before, reset it to its factory default settings first. Refer to its documentation for more information.)

D Connect the Internet phone's power adapter to its power port, and then plug the power adapter into an electrical outlet.

E The Internet phone will reboot two to three times (each reboot may take up to one minute). The System will automatically assign an extension number to the Internet phone. When the Internet phone displays it extension number, then it is ready for use.

> **NOTE:** The System automatically registers Linksys SPA-family Internet phones (including model number SPA941). If you connect a different SIP-compatible phone, then registration will be manual. Refer to your phone's documentation.
>
> **NOTE:** The default SIP port of the System is **6060**.

F Repeat steps C-E until you have installed all of your Internet phones.

Congratulations! Now you can make calls from one Internet phone to another by dialing an extension number.

Continue to the next section.

Make sure you have an active Internet connection. Then configure the settings for your Internet phone service.

A Launch the web browser on the administration computer.

B Enter *<IP address of the System>*/admin/voice/ advanced in the *Address* field (use the static IP address you previously assigned to the System). Then press **Enter**.

C The *Voice - Info* screen will appear. Click the **Line 1** tab.

D In the Subscriber Information section, complete these fields:

User ID - Enter the user ID (also called the account number) supplied by your ITSP. Do not use any hyphens, spaces, or other punctuation.

Password - Enter the case-sensitive password supplied by your ITSP.

> **NOTE:** If your Internet Telephony Service Provider (ITSP) supplied the System, then it may be pre-configured for you, and you do not need to change any settings. Refer to the instructions supplied by your ITSP for more information.

E In the Proxy and Registration section, complete the *Proxy* field.

Proxy - Enter the proxy address supplied by your ITSP.

F If you have additional settings, enter those as well. Refer to the instructions your ITSP gave you.

G Click **Submit All Changes**.

H The System will reboot itself. Then the Internet phones will reboot themselves.

I The *Voice - Info* screen will appear. In the Line 1 Status section, make sure that the Registration Status says, "Registered."

You can use any phone connected to the System to make external calls. However, you cannot receive calls on any analog telephone unless you configure the appropriate settings. Refer to the User Guide for instructions about the FXS settings. (You can download the User Guide at *www.linksys.com*.)

Congratulations! Now you can make external calls.

> **NOTE:** Dial **9** first when you make an external call with the default US dial plan.
>
> If you cannot make calls with the default US dial plan, visit **www.linksys.com/kb** for additional dial plans, or refer to the User Guide to write your own script. (You can download the User Guide at **www.linksys.com**.)

To receive external phone calls, you need to know the Direct Inward Dialing (DID) number assigned to you by your ITSP. Usually this is the same as your user ID, but it can be a different number. Check with your ITSP to find out what your DID number is.

Then decide which Internet phones will ring when an outside caller calls your DID number. The default is **aa**, which stands for auto-attendant, an automated system that picks up external calls and plays pre-recorded voice messages. If you want only the auto-attendant to receive a call, keep the default setting. When the auto-attendant receives a call, it will prompt the caller to dial the appropriate extension.

If you want specific Internet phones to ring when your DID number is called, then refer to the User Guide for instructions about the Contact List setting. (You can download the User Guide at *www.linksys.com*.)

By default, the daytime auto-attendant is enabled, so the first message it plays ("If you know your party's extension, you may enter it now") is suitable for business hours.

If you want a caller to hear a different greeting during nighttime (non-business) hours, then refer to the Auto-Attendant Quick Installation, which is available at *www.linksys.com*.

> **NOTE:** If you decide to keep traditional phone service, which is also known as Plain Old Telephone Service (POTS), then you will use the Linksys Analog Telephone Adapter (model number: SPA3000). For details, refer to the Analog Telephone Adapter's documentation.

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For additional information or troubleshooting help, refer to the User Guide, which is available on the Linksys website. Contact your Internet Telephony Service Provider for further support.

Linksys Website
http://www.linksys.com or
http://www.linksys.com/support

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