

# IP Direct Calling



The following instructions<sup>1)</sup> are to make direct IP-to-IP calls using the Cisco SPA525G or SPA504G phones. For instructions on using our local PBX, see the [instructions are here](#).

## General Notes:

- All steps are done as Administrator on the advanced page.
- This setup will configure the last extension and line key for direct IP dial calls and leave extension 1 / line key 1 for PBX calls.
- It may be a good idea to Submit All Changes after each step but it also may be unnecessary.
- Outgoing calls may be placed from the personal directory, speed dial buttons or the dial pad. When using the dial pad, end the IP address with a # character. This will send the call out immediately.
- If you like, you can publish your phone's IP number on the mesh status page so others can add your phone directly.
- If you are replacing an existing speed dial button with the new direct dialing Line, make sure to remove the previous info in the Short Name and Extended Functions boxes.

# SPA525G

## Ext 1 tab

- SIP Settings
  - SIP Port: 5070



### IP Phone SPA525G2

Cisco Systems, Inc.

Voice	Wi-Fi	Bluetooth	Personal Address Book	Call History	Speed Dials	Firmware Upgrade							
Info	System	SIP	Provisioning	Regional	Phone	<b>Ext 1</b>	Ext 2	Ext 3	Ext 4	Ext 5	User	Att Console	TR-069

[Attendant Console Status](#) | [User Login](#) | [basic](#) | [advanced](#)

#### General

Line Enable:  yes

#### Share Line Appearance

Share Ext:  private | Shared User ID:   
Subscription Expires: 3600 | Restrict MWI:  no

#### NAT Settings

NAT Mapping Enable:  no | NAT Keep Alive Enable:  no  
NAT Keep Alive Msg: \$NOTIFY | NAT Keep Alive Dest: \$PROXY

#### Network Settings

SIP TOS/DiffServ Value: 0x68 | SIP CoS Value: 3  
RTP TOS/DiffServ Value: 0xb8 | RTP CoS Value: 6  
Network Jitter Level: high | Jitter Buffer Adjustment: up and down

#### SIP Settings

SIP Transport:  UDP | SIP Port: 5070

## Ext 5 tab (or any free Ext you want to use)

- General
  - Line Enable: yes
- SIP Settings
  - SIP Port: 5060

 <b>IP Phone SPA525G2</b> Cisco Systems, Inc.														
Voice		Wi-Fi		Bluetooth		Personal Address Book			Call History		Speed Dials		Firmware Upgrade	
Info	System	SIP	Provisioning	Regional	Phone	Ext 1	Ext 2	Ext 3	Ext 4	<b>Ext 5</b>	User	Att Console	TR-069	
													<a href="#">Attendant Console Status</a> <a href="#">User Login</a> <a href="#">basic</a>   <a href="#">advanced</a>	
<b>General</b>														
Line Enable:		yes ▾												
<b>Share Line Appearance</b>														
Share Ext:		private ▾				Shared User ID:								
Subscription Expires:		3600				Restrict MWI:				no ▾				
<b>NAT Settings</b>														
NAT Mapping Enable:		no ▾				NAT Keep Alive Enable:				no ▾				
NAT Keep Alive Msg:		\$NOTIFY				NAT Keep Alive Dest:				\$PROXY				
<b>Network Settings</b>														
SIP TOS/DiffServ Value:		0x68				SIP CoS Value:				3 ▾				
RTP TOS/DiffServ Value:		0xb8				RTP CoS Value:				6 ▾				
Network Jitter Level:		high ▾				Jitter Buffer Adjustment:				up and down ▾				
<b>SIP Settings</b>														
SIP Transport:		UDP ▾				SIP Port:				5060				

- Proxy and Registration
  - Register: no
  - Make Call Without Reg: yes
  - Ans Call Without Reg: yes
- Subscriber Information:
  - Enter your Call and Direct for example

Proxy and Registration			
Proxy:			
Outbound Proxy:			
Alternate Proxy:			
Alternate Outbound Proxy:	0		
Use Outbound Proxy:	no	Use OB Proxy In Dialog:	yes
Register:	no	Make Call Without Reg:	yes
Register Expires:	3600	Ans Call Without Reg:	yes
Use DNS SRV:	no	DNS SRV Auto Prefix:	no
Proxy Fallback Intvl:	3600	Proxy Redundancy Method:	Normal
Dual Registration:	no	Auto Register When Failover:	no
Subscriber Information			
Display Name:	VE7LSE DIRECT	User ID:	
Password:		Use Auth ID:	no
Auth ID:		Reversed Auth Realm:	0
Mini Certificate:			
SRTP Private Key:			
Resident Online Number:		SIP URI:	

- Dial Plan
  - Dial Plan: (x.<\*:.>x.<\*:.>x.<\*:.>x.)
  - Enable IP Dialing: Yes

Dial Plan			
Dial Plan:	(x.<*:.>x.<*:.>x.<*:.>x.)		
Caller ID Map:			
Enable IP Dialing:	yes	Emergency Number:	

# Phone tab

- Line Key 1
  - Extension: 1
- Line Key 5
  - Extension: 5 or your preference Line Key



Make sure your line keys do not have anything entered for extended Function.

Info	System	SIP	Provisioning	Regional	Phone	Ext 1	Ext 2	Ext 3	Ext 4	Ext 5	User	Att Console	TR-069
<a href="#">Attendant Console Status</a>   <a href="#">User Login</a>   <a href="#">basic</a>   <a href="#">advanced</a>													
<b>General</b>													
Station Name:		VE7LSE				Station Display Name:		VE7LSE					
Voice Mail Number:		*97											
<b>BluePhone</b>													
Bluetooth Mode:		Phone				Line:		5					
Short Name:						User Friendly ID:							
PIN Code:		*****											
<b>Line Key 1</b>													
Extension:		1				Short Name:		VE7LSE 2202					
Share Call Appearance:		private											
Extended Function:													
<b>Line Key 2</b>													
Extension:		2				Short Name:		VE7LSE 3302					
Share Call Appearance:		private											
Extended Function:													
<b>Line Key 3</b>													
Extension:		Disabled				Short Name:		VE7ODG 2201					
Share Call Appearance:		private											
Extended Function:		fnc=sd+cp+blf;sub=2201@\$PROXY											
<b>Line Key 4</b>													
Extension:		Disabled				Short Name:		VA7DXX 2203					
Share Call Appearance:		private											
Extended Function:		fnc=blf+sd+cp;sub=2203@\$PROXY											
<b>Line Key 5</b>													
Extension:		5				Short Name:		VE7LSE IP DIALING					
Share Call Appearance:		private											
Extended Function:													

## Outgoing Direct-IP dialed calls

### Personal Directory

This section is done on the phone itself. To add to the directory:

- Press your line key that is setup for direct dialing
- Dial IP of the phone you want to call (using the \* key as a .)  
For example, to enter 10.10.123.123, key in: 1\*1\*123\*123
- Press **Dial** to make sure it works.
- Press Setup button: 
- Navigate to 2. Call History
- Navigate to 4. Placed Calls
- Navigate to the call you just placed using the IP Address
- Press the **Option** button.
- Navigate to Add to Address Book
- Enter the info you want in there then press **Save**

The reason for this method is that the SPA525G does not recognize an IP address entered into the web interface when adding a directory entry. If anyone figures out a work around, please let us know.

How to add direct IP contacts to your speed dial buttons on your phone's spare line keys or Attendant Console keys:

### Phone

- Line Key x
  - Extension: Disabled
  - Short Name: Enter a short name
  - Extended Function: Enter something like: vid=5;fnc=sd;ext=10.46.174.182



- vid=5 refers to the line key used for this speed dial button
- Change the IP address and name to the correct one you are trying to add



## IP Phone SPA525G2

Cisco Systems, Inc.

Voice	Wi-Fi	Bluetooth	Personal Address Book	Call History	Speed Dials	Firmware Upgrade							
Info	System	SIP	Provisioning	Regional	<b>Phone</b>	Ext 1	Ext 2	Ext 3	Ext 4	Ext 5	User	Att Console	TR-069

[Attendant Console Status](#) | [User Login](#) | [basic](#) | [advanced](#)

**General**

Station Name: VE7LSE      Station Display Name: VE7LSE

Voice Mail Number: \*97

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**BluePhone**

Bluetooth Mode: Phone      Line: 5

Short Name:      User Friendly ID:

PIN Code: \*\*\*\*\*

---

**Line Key 1**

Extension: 1      Short Name: VE7LSE 2202

Share Call Appearance: private

Extended Function:

---

**Line Key 2**

Extension: 2      Short Name: VE7LSE 3302

Share Call Appearance: private

Extended Function:

---

**Line Key 3**

Extension: Disabled      Short Name: VA7PF DIRECT

Share Call Appearance: private

Extended Function: vid=5;fnc=sd;ext=10.46.174.182

## ATT Console

- Cut and paste this example into a free "Unit 1 or Unit 2 Key":

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

Unit 1 Key 3:

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

# SPA504G

## Ext 1 tab

- SIP Settings
  - SIP Port: 5070

The screenshot displays the Cisco SPA504G Configuration Utility interface. The top navigation bar includes "Voice", "Call History", "Personal Directory", and "Attendant Console Status". Below this, a secondary navigation bar shows "Info", "System", "SIP", "Provisioning", "Regional", "Phone", "User", and "Attendant Console". The "SIP" section is active, and the "Ext 1" tab is selected. The configuration is organized into several sections:

- General:** Line Enable:
- Share Line Appearance:** Share Ext: ; Shared User ID: ; Subscription Expires: ; Monitor User ID: ; Restrict MWI: ; SCA Unseize Delay:
- NAT Settings:** NAT Mapping Enable: ; NAT Keep Alive Enable: ; NAT Keep Alive Msg: ; NAT Keep Alive Dest:
- Network Settings:** SIP TOS/DiffServ Value: ; RTP TOS/DiffServ Value: ; Network Jitter Level: ; SIP CoS Value: ; RTP CoS Value: ; Jitter Buffer Adjustment:
- SIP Settings:** SIP Transport: ; SIP 100REL Enable: ; SIP Port: ; EXT SIP Port:

## Ext 4 tab or any free Ext you want to use

- General
  - Line Enable: yes
- SIP Settings
  - SIP Port: 5060

The screenshot shows the Cisco SPA504G Configuration Utility interface. The top navigation bar includes 'Voice', 'Call History', 'Personal Directory', and 'Attendant Console Status'. Below this, there are tabs for 'Info', 'System', 'SIP', 'Provisioning', 'Regional', 'Phone', 'User', and 'Attendant Console'. The 'Ext 4' tab is selected. The configuration is organized into several sections:

- General:** Line Enable: yes
- Share Line Appearance:** Share Ext: private, Subscription Expires: 3600, Monitor User ID: (empty), Shared User ID: (empty), Restrict MW: no, SCA Unseize Delay: 0
- NAT Settings:** NAT Mapping Enable: no, NAT Keep Alive Msg: \$NOTIFY, NAT Keep Alive Enable: no, NAT Keep Alive Dest: \$PROXY
- Network Settings:** SIP TOS/DiffServ Value: 0x68, RTP TOS/DiffServ Value: 0xb8, Network Jitter Level: high, SIP CoS Value: 3, RTP CoS Value: 6, Jitter Buffer Adjustment: up and down
- SIP Settings:** SIP Transport: UDP, SIP 100REL Enable: no, SIP Port: 5060, EXT SIP Port: (empty)

- Proxy and Registration
  - Register: no
  - Make Call Without Reg: yes
  - Ans Call Without Reg: yes
- Subscriber Information
  - Enter your Call and Direct for example

The screenshot shows the configuration for Proxy and Registration and Subscriber Information:

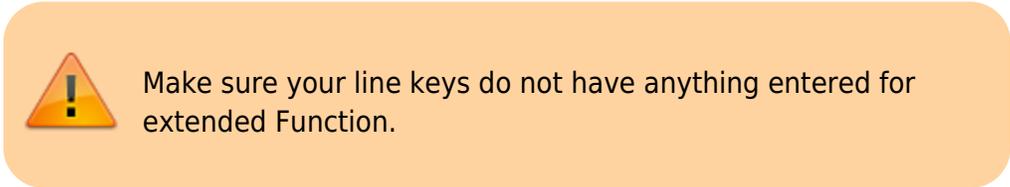
- Proxy and Registration:** Proxy: (empty), Outbound Proxy: (empty), Alternate Proxy: (empty), Alternate Outbound Proxy: (empty), Use Outbound Proxy: no, Register: no, Register Expires: 3600, Use DNS SRV: no, Proxy Fallback Intvl: 3600, Dual Registration: no, Use OB Proxy In Dialog: yes, Make Call Without Reg: yes, Ans Call Without Reg: yes, DNS SRV Auto Prefix: no, Proxy Redundancy Method: Normal, Auto Register When Failover: no
- Subscriber Information:** Display Name: VE7BEF Direct, Password: (empty), User ID: (empty), Use Auth ID: no

- Dial Plan
  - Dial Plan: (x.<\*:.>x.<\*:.>x.<\*:.>x.)
- Enable IP Dialing: Yes

<b>Dial Plan</b>	
Dial Plan:	(x.<*:.>x.<*:.>x.<*:.>x.)
Caller ID Map:	
Enable IP Dialing:	yes
Emergency Number:	

## Phone tab

- Line Key 1
  - Extension: 1
- Line Key 4
  - Extension: 4 or your preference Line Key



Info	System	SIP	Provisioning	Regional	Phone	User	Attendant Console
Ext 1	Ext 2	Ext 3	Ext 4				
<b>General</b>							
Station Name:	2211	Station Display Name:	VE7BEF				
Voice Mail Number:	*97	Text Logo:					
BMP Picture Download URL:		Select Logo:	Default	Select Background Picture:	None		
Softkey Labels Font:	Auto	Screen Saver Enable:	no	Screen Saver Icon:	Background Picture		
Screen Saver Wait:	300						
<b>Line Key 1</b>							
Extension:	1	Short Name:	SUSER				
Share Call Appearance:	private						
Extended Function:							
<b>Line Key 2</b>							
Extension:	2	Short Name:	VE7BEF 3311				
Share Call Appearance:	private						
Extended Function:							
<b>Line Key 3</b>							
Extension:	Disabled	Short Name:	VE7LSE Direct				
Share Call Appearance:	private						
Extended Function:	vid=4;fnc=sd;ext=10.46.174.182						
<b>Line Key 4</b>							
Extension:	4	Short Name:	VE7BEF IP Dialing				
Share Call Appearance:	private						
Extended Function:							

## Outgoing Direct-IP dialed calls

### Personal Directory

In each box, place an entry for each desired phone. Examples:

```
n=VE7LSE;p=10.1.2.3  
n=N2MH;p=10.73.73.66
```

The screenshot shows the Cisco SPA504G Personal Directory web interface. At the top, there is a header with the Cisco logo, 'Small Business', and 'SPA504G Personal Directory'. On the right side of the header, there is an 'Admin Login' button and links for 'basic' and 'advanced' views. Below the header is a navigation menu with four items: 'Voice', 'Call History', 'Personal Directory' (which is highlighted in green), and 'Attendant Console Status'. Underneath the navigation menu is a 'Directory' section, also highlighted in green. This section contains a table with 6 numbered rows. The first row contains the text 'n=VE7LSE;p=10.1.2.3'. The third row contains the text 'n=N2MH;p=10.73.73.66'. The other rows are empty.

Directory	
1.	<input type="text" value="n=VE7LSE;p=10.1.2.3"/>
2.	<input type="text"/>
3.	<input type="text" value="n=N2MH;p=10.73.73.66"/>
4.	<input type="text"/>
5.	<input type="text"/>
6.	<input type="text"/>

How to add direct IP contacts to your speed dial buttons on your phone's spare line keys or Attendant Console keys:

## Phone

- Line Key x
  - Extension: Disabled
  - Short Name: Enter a short name
  - Extended Function: Enter something like: `vid=4;fnc=sd;ext=10.46.174.182`



- `vid=4` refers to the line key used for this speed dial button
- Change the IP address and name to the correct one you are trying to add

The screenshot shows the Cisco SPA504G Configuration Utility interface. The top navigation bar includes 'Voice', 'Call History', 'Personal Directory', and 'Attendant Console Status'. Below this, there are tabs for 'Info', 'System', 'SIP', 'Provisioning', 'Regional', 'Phone', 'User', and 'Attendant Console'. The 'Phone' tab is selected, and the 'Line Key 3' configuration is highlighted. The 'General' section includes fields for Station Name (2211), Station Display Name (VE7BEF), Voice Mail Number (\*97), and various settings for logos and background pictures. The 'Line Key 3' section shows the Extension set to 'Disabled', the Short Name as 'VE7LSE Direct', and the Extended Function as 'vid=4;fnc=sd;ext=10.46.174.182'. Other line keys are also visible, such as Line Key 1 with Extension '1' and Short Name '\$USER', and Line Key 2 with Extension '2' and Short Name 'VE7BEF 3311'.

## ATT Console

- Cut and paste this example into a free “Unit 1 or Unit 2 Key”:

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

Unit 1 Key 3:

```
vid=5;fnc=sd;ext=10.46.174.182;nme=VA7PF DIRECT
```

1)

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