

# **IPStar**

## **Operation Manual**

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*Talk over Internet for Free*

**DSG Technology, Inc.**  
*<http://www.dsgtechnology.com>*

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# Understanding the IPStar

*Congratulations on the selection of IPStar. Besides being relatively inexpensive to install and easy to configure, IPStar is the first Internet Telephony appliance that provides both IPStar-to-IPStar and IPStar-to-Phone capabilities via Internet!*

IPStar is a revolution of Voice over Internet Protocol (VoIP) product that offers full duplex, high quality and low latency voice conversation through the Internet. Choosing IPStar is an important addition to the home or office for its International and Long-Distance cost-saving benefits.

## A Brief Overview

In the past, real-time voice information is sent over the Public Switched Telephone Network (PSTN). With the Circuit-Switched Technology, every call takes up a dedicated bandwidth. End-to-end calls are established on the basis of a sequence of dialed digits, and the PSTN dedicates a physical path between callers. Although the telephone equipment establishes the call path at the beginning of the call, the path may change between calls, but not during any specific call.


## ■ No Computer Needed

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In comparison with a PSTN, an Internet Protocol (IP) Network has a Packet-Switched architecture. Devices transmit data in packets, and the path from end to end can vary within an established session. In addition to data, packets also contain addressing information, which routing devices use to send information to its destination. Routing devices maintain tables which instruct them how to direct packets. As networking environments change, routing devices are updated with dynamic protocols.

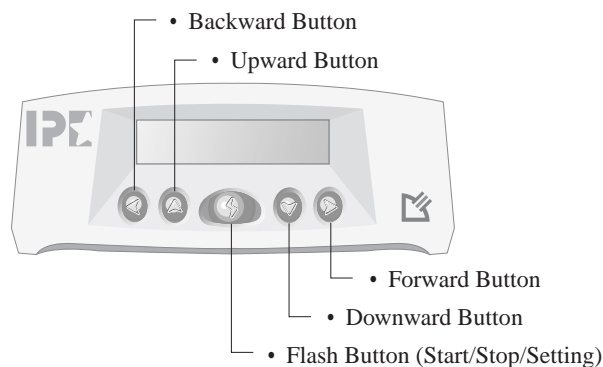
Traditionally, the PSTN was the only network supporting voice communication. With an IPStar, voice traffic can be sent over IP-based Packet-Switched networks!

## No Computer Needed

IPStar possesses its own processor and network interface; it works intelligently. Simply enter the Internet account into the IPStar with the phone keypad and press the  button on the IPStar, then users are ready to talk as long as they wish via Internet. All of the communication costs will be eliminated except a local Internet connection charge.

## User - Friendly Interface


With a back-lit LCD display and five buttons, IPStar is extremely easy to use and to configure. The smart setup program allows the IPStar ready-to-go in three minutes. All the system status can be clearly monitored through the LCD panel.



## Main Features

IPStar is a unique and efficient electronic device being made. In addition to IPStar-to-IPStar and Direct Link modes, the unparalleled IPStar-to-Phone and Direct-IP modes greatly enhance the capability of voice communication by using Internet. IPStar users can save significantly on Long-Distance and International call charges with these features.

### IPStar-to-IPStar Mode

If the receiving party is equipped with an IPStar, just dial the phone number as usual and talk to the remote IPStar owner instantly. When the call is answered, simply press the  on the IPStar and the call will be automatically switched from a regular phone call to an Internet call.



### IPStar-to-Phone Mode

Every IPStar has the ability to communicate with other Internet Telephony products, such as *DSG IP1000 and DSG IP2000 Gateways\**. With an active *Internet Telephony Service Provider\** (ITSP) account, users can call all the covered areas with extra-low service rates.



## ■ Main Features

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**Note:** To use IPStar-to-Phone mode, callers must apply an active ITSP account number from DSG compatible ITSPs. Please check [www.dsgtechnology.com](http://www.dsgtechnology.com) and refer to **Chapter 6 How to Get an ITSP Account** for further information.

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**Note:** An Internet Telephony Gateway is a gate between Internet and PSTN (Public Switched Telephone Network). The Internet Telephony Gateway enables callers using Internet to talk to regular phone users without IPStar.

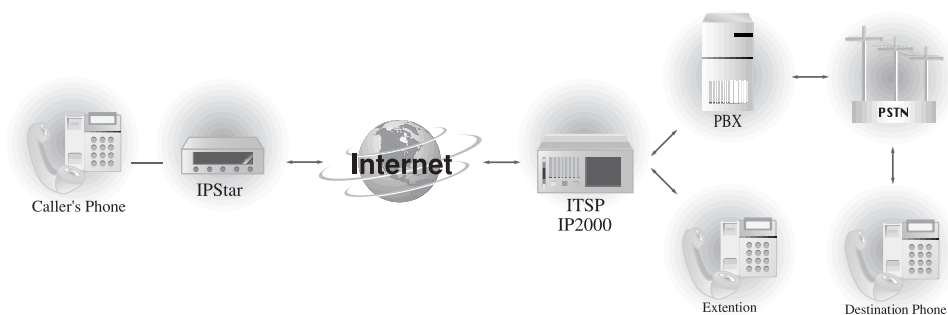
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### Direct-Link Mode

Every IPStar comes with a unique six-digit ID number. In Direct-Link mode, simply dial the ID with a leading [\*] key and you will be connected to other on-line IPStar users immediately. The users will save the cost of an initial Long-Distance call with this feature.

### Direct-IP Mode

IPStar has the ability to communicate with other compatible Internet Telephony products, such as InterStar, IPStar, or any *DSG IP1000 and DSG IP2000 Gateways\**. By setting the IP Address of receiving gateway, IPStar may route the call to an extension or PSTN via these compatible gateways.



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**Note:** *IP1000 and IP2000 are part of the DSG's selection of Internet Telephony products. IP1000 is a stand-alone Internet telephony gateway and IP2000 is an NT-based Internet Telephony gateway. Please check [www.dsgtechnology.com](http://www.dsgtechnology.com) for further information.*

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## Free Online Upgrade

The design of IPStar is extremely flexible. More and more new options and functions will be added into the IPStar via the online upgrade function. Users are guaranteed to enjoy the latest added features for instant convenience and hassle-free selections at no cost.



## ■ User-Friendly Interface

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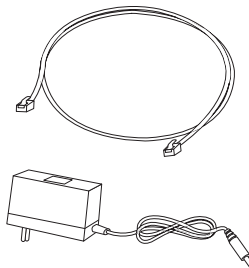
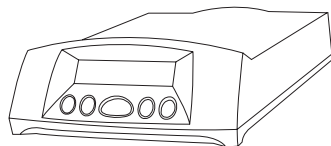
# Installing the IPStar

*Connecting IPStar is as simple as connecting an answering machine.*

## Package Contents

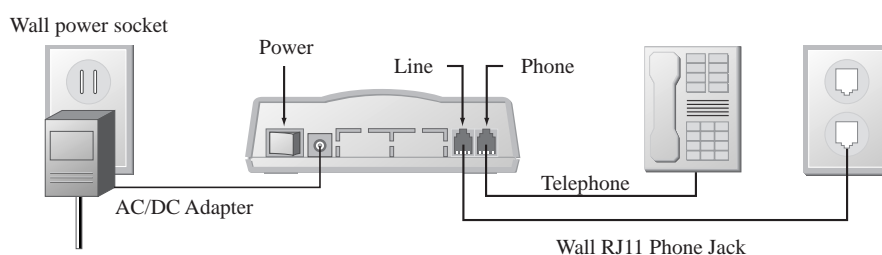
In the IPStar package, users will find:

- An IPStar
- An operation manual
- A quick start guide
- A warranty card
- An 12V/1A DC power adapter
- An RJ-11 phone cord



## Installing the IPStar

As shown in the following graph, connecting IPStar is as simple as connecting an answering machine.



### Install the IPStar

1. Unplug the phone from the wall-jack, and plug it into the RJ11 jack labeled **PHONE** on the back of IPStar.
2. Plug one end of the phone cord came with the package into the wall-jack.
3. Plug the loose end of the cord into the RJ11 jack labeled **LINE** on the IPStar.
4. Plug the power adapter into an electrical outlet. Please **DO NOT** turn on the power switch yet.
5. Plug the DC adapter connector into IPStar power socket labeled **DC 12V**.
6. Turn on the power switch of the IPStar.

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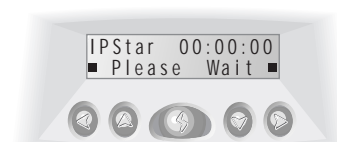
**Note:** *If using an answering machine, please connect it between the wall-jack and IPStar RJ11 jack labeled **LINE**.*

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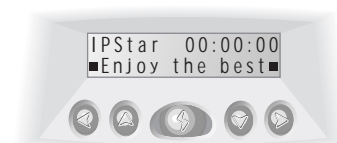
After the power switch is turned on, the IPStar's LCD screen will display:



After the system check process, the IPStar's LCD screen will display:



After a few seconds, the IPStar's LCD screen will display:



The user can pick up the telephone handset at this stage. If there is a dial tone, that means the installation has successfully being completed.

## Basic Requirements to Use IPStar


Please check the following list in order to make an Internet call with the IPStar.

- An active Internet connection
  - ✓ Local Internet access phone number
  - ✓ User name
  - ✓ Password
- A touch-tone phone
- An analog phone line
- An 110/230V electrical outlet

# IPStar Configuration Mode

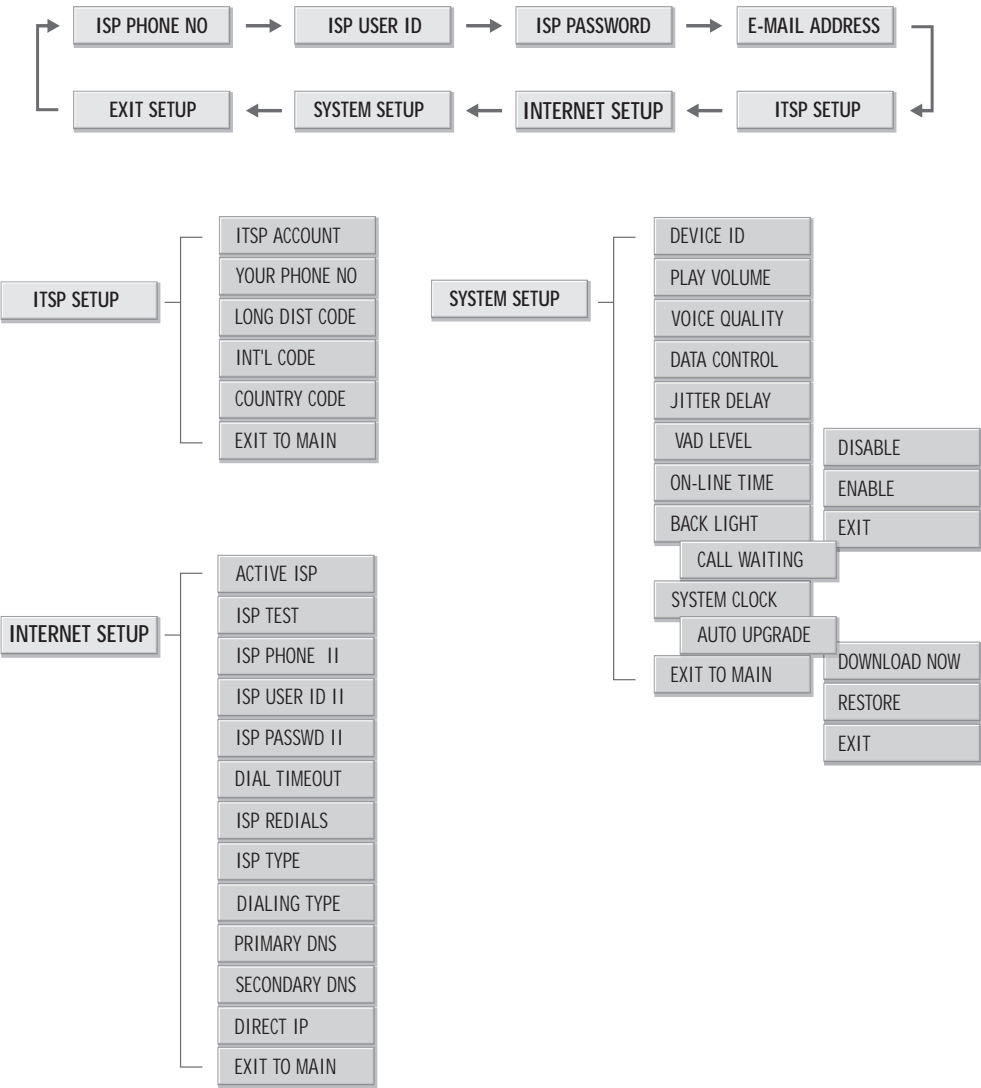
*With the smart configuration program, IPStar is ready-to-use in three minutes!*

## Entering Configuration Mode

Press and hold IPStar  for two seconds. IPStar will switch to Configuration Mode and display **ISP PHONE NO:**



# Structure of Configuration Mode



## Using Phone Keypad to Configure IPStar

To configure the IPStar, use the keypads on the touch-tone phone to scroll the menu and to input the necessary information for IPStar as below:

### Browsing the Menu

back to the previous option



go to the next option

select the option or enter the editing mode

### Selecting Between Fixed Values

back to the previous value



go to the next value

save the setting and leave the editing mode



### Editing the Data of an Option



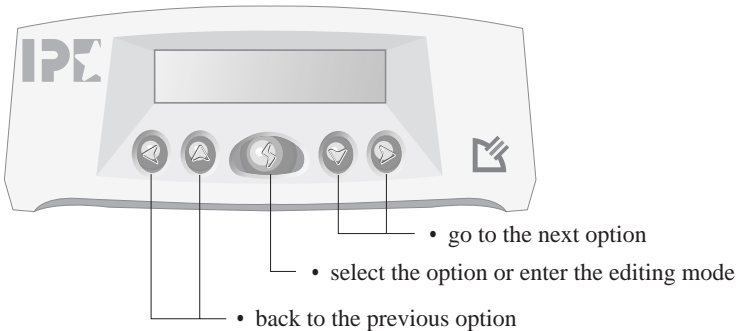
Key	Characters
[1]	1 ~ ! # \$ % ^ & * ( ) _ + : " < > ? - = ; ' / [ ] { } ' \
[2]	2 a b c A B C
[3]	3 d e f D E F
[4]	4 g h i G H I
[5]	5 j k l J K L
[6]	6 m n o M N O
[7]	7 p q r s P Q R S
[8]	8 t u v T U V
[9]	9 w x y z W X Y Z
[0]	0 . , @

**Tips:** Performing hook-flash (momentarily depressing the hook-switch) will save the current setting and escape to upper menu level.

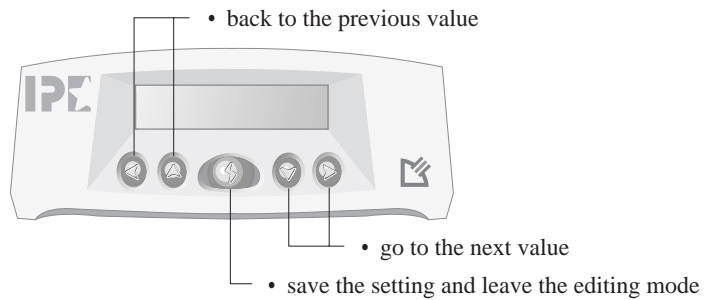
## Using Buttons to Configure IPStar

The functions for the five buttons on IPStar are described as the following:

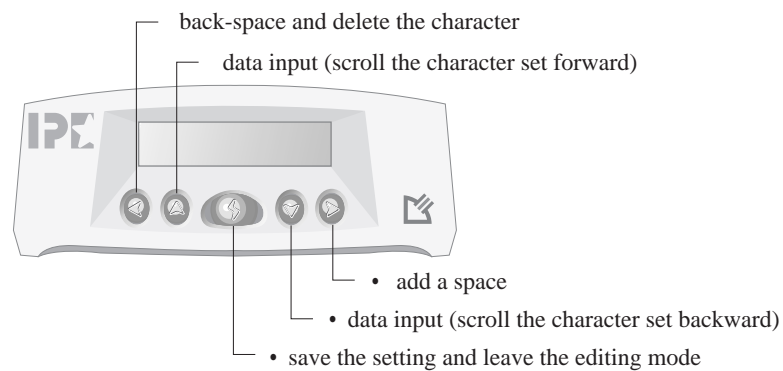
### Browsing the Menu



## Selecting Between Fixed Values



## Editing the Data of an Option



forward  → → → → → → → →

0 1 2 3 4 5 6 7 8 9 a b c d e f g h i j k l m n o p q r s t u v w x y z  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z . @ ~ ! # \$ %  
 ^ & \* ( ) \_ + | : " < > ? - = ; ' / , [ ] { } ' \

← ← ← ← ← ← ← ←  backward

## Basic Setup (IPStar-to-IPStar / Direct-Link Mode)




Before using the IPStar device, the user needs to subscribe an Internet access line from the local ISP. To use IPStar-to-IPStar and Direct-Link modes, only **ISP PHONE NO.**, **ISP USER ID**, and **ISP PASSWORD** are required.

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***Tips:** Some of Internet Service Providers (ISP) require the user to input DNS information or a login script for Internet connection. There are more information about these advance settings in *INTERNET SETUP* section.*

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### ISP Phone Number (Required)

1. Press the  on IPStar for two seconds to enter the Configuration Mode.
2. With **ISP PHONE NO.** displayed, press  to edit this option.
3. Use the keypad on the phone or buttons on IPStar to input the Internet dialup phone number obtained from the local ISP.
4. Press  to save and exit edit mode.





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***Note:** If the IPStar is connected to an extension of a PBX, users need to input a "0" or "9" and a pause to dial out from the PBX. A comma "," stands for 0.5 second pause and this can be entered by buttons.*



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### ISP User ID (Required)

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP USER ID** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the login name for user's Internet account.
4. Press  to save and exit edit mode.





### ISP Password (Required)

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP PASSWORD** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the password for user's Internet account.
4. Press  to save and exit edit mode.



### E-mail Address (Optional)

1. Use the buttons on IPStar to scroll the menu.
2. With **E-MAIL ADDRESS** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input user's email address.
4. Press  to save and exit edit mode.



## ITSP Setup (IPStar-to-Phone Mode)

The IPStar-to-Phone mode allows the IPStar to connect to a compatible gateway, such as *DSG IP2000 Internet Telephony Gateway\**, so that the receiving party is able to receive an Internet phone call with any regular phone. To use the **IPStar-to-Phone** mode, the user needs to get a valid *ITSP account\** and enter all the required information in **ITSP Setup** section.

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**Note:** *DSG IP2000 is an NT-based Internet Telephony gateway.*

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**Note:** Please check [www.dsgtechnology.com](http://www.dsgtechnology.com) and refer to **Chapter 6 How to Get an ITSP Account** for further information about applying an active ITSP account number from DSG compatible Internet Telephony Service Providers (ITSP).

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With **ITSP SETUP** displayed, press  to enter the sub-menus.





### ITSP Account ID (Required for IPStar-to-Phone Mode)

1. Use the buttons on IPStar to scroll the menu.
2. With **ITSP ACCOUNT** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the 10-digit account number obtained from user's ITSP.
4. Press  to save and exit edit mode.





### User's Phone Number (Optional)

1. Use the buttons on IPStar to scroll the menu.
2. With **YOUR PHONE NO** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the phone number used to connect with the IPStar.
4. Press  to save and exit edit mode.




### Long-distance Code (Required for IPStar-to-Phone Mode)

1. Use the buttons on IPStar to scroll the menu.
2. With **LONG DIST CODE** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the code for making a domestic Long-Distance phone call. For instance, the Long-Distance code in USA is **1**.
4. Press  to save and exit edit mode.




### International Code (Required for IPStar-to-Phone Mode)

1. Use the buttons on IPStar to scroll the menu.
2. With **INT'L CODE** displayed, press  to edit.





## ■ Internet Setup

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3. Use the keypad on the phone or buttons on IPStar to input the code for making an International phone call. For instance, the International code in USA is **011**.
4. Press  to save and exit edit mode.

### Country Code (Required for IPStar-to-Phone Mode)

1. Use the buttons on IPStar to scroll the menu.
2. With **COUNTRY CODE** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the Country code. For example, the Country code of USA is **1**.
4. Press  to save and exit edit mode.




### Exit to Main Menu

press  on **EXIT TO MAIN** to leave **ITSP SETUP** section.





## Internet Setup

This section consists of all settings in ISP dial-up process. Use the buttons on IPStar to scroll to **INTERNET SETUP** and press  to enter the sub-menus.





## Active ISP

1. Use the buttons on IPStar to scroll the menu.
2. With **ACTIVE ISP** displayed, press  to edit.
3. There are two sets of Internet accounts that can be used for IPStar. Users may select from the default account in the main menu or the secondary account in the **Internet Setup** menu.
4. Use the keypad on the phone or buttons on IPStar to toggle between Default and Secondary accounts.
5. Press  to save and exit edit mode.



## ISP Test



The **ISP TEST** is a test that can only be performed once all the required information has been entered.

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP TEST** displayed, press  to edit.
3. The LCD screen will display the progress of the ISP test. To interrupt the test, press  for one second.
4. The LCD screen will display the result. If "Failure" is displayed, call the local ISP to check all required information and adjust the appropriate settings for the IPStar.







### Secondary ISP Phone Number (Optional)

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP PHONE II** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the phone number for a secondary Internet account.
4. Press  to save and exit edit mode.





### Secondary ISP User ID (Optional)

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP USER ID II** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the login name for a secondary Internet account.
4. Press  to save and exit edit mode.





### Secondary ISP Password (Optional)

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP PASSWD II** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the password for a secondary Internet account.
4. Press  to save and exit edit mode.





## Dial Timeout

1. Use the buttons on IPStar to scroll the menu.
2. With **DIAL TIMEOUT** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the time limitation of establishing an Internet dial-up connection for each dialing attempt. The valid range is from 10 to 99 seconds.
4. Press  to save and exit edit mode.




## ISP Redials

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP REDIALS** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the number of redial attempts when trying to reach the local ISP. The valid range is from 1 to 20.
4. Press  to save and exit edit mode.




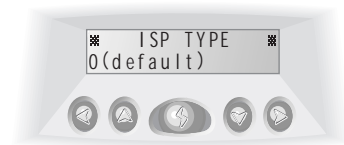
## ISP TYPE

1. Use the buttons on IPStar to scroll the menu.
2. With **ISP TYPE** displayed, press  to edit.



## ■ Internet Setup

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3. Besides a local dial-up access number, user ID and password, IPStar requires the correct Internet access type to communicate with the local ISP. Most ISPs use standard PAP without login script, that is, the default type is **0**.
4. Use the keypad on the phone or buttons on IPStar to select the type. The valid range is from 1 to 20.
5. Press  to save and exit edit mode.





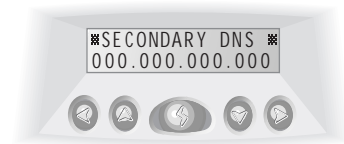
### Primary DNS

1. Use the buttons on IPStar to scroll the menu.
2. With **PRIMARY DNS** displayed, press  to edit.
3. Some of the ISPs require the subscriber to provide the IP Addresses of primary DNS and secondary DNS. Please call the local ISP to request for these information.
4. Use the keypad on the phone or buttons on IPStar to input the IP Address of primary DNS. The valid range is from 000.000.000.000 to 255.255.255.255.
5. Press  to save and exit edit mode.





## Secondary DNS

1. Use the buttons on IPStar to scroll the menu.
2. With **SECONDARY DNS** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the IP Address of secondary DNS. The valid range is from 000.000.000.000 to 255.255.255.255.
4. Press  to save and exit edit mode.



## Direct IP (Required for Direct-IP Mode)

1. Use the buttons on IPStar to scroll the menu.
2. With **DIRECT IP** displayed, press  to edit.
4. IPStar has the capability to operate under Direct-IP mode, which allows the user to talk to the called party using other compatible products like *DSG IP1000* and *DSG IP2000 Internet Telephony Gateways\**. This field is for the IP Address of the remote DSG IP1000/IP2000, InterStar or *IPStar\** that the user wants to connect.
3. Use the keypad on the phone or buttons on IPStar to input the IP Address.
3. Enter the IP Address of choice. The valid range is from 000.000.000.000 to 255.255.255.255.
4. Press  to save and exit edit mode.



## ■ System Setup

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**Note:** DSG IP1000 and DSG IP2000 are part of DSG's selection of Internet Telephony products. IP1000 is a stand-alone Internet Telephony gateway and IP2000 is an NT-based Internet Telephony gateway. Please check [www.dsgtechnology.com](http://www.dsgtechnology.com) for further information.

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**Note:** The receiving IPStar should have a fixed IP Address, therefore providing the caller with fixed accessibility.


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### Exit to Main Menu

Press  on **EXIT TO MAIN** to leave **Internet Setup** section.




## System Setup

This section contains advanced system settings of IPStar. Users can adjust these setting to maximize the performance of IPStar. Use the buttons on IPStar to scroll to **SYSTEM SETUP** and press  to enter the sub-menus.





### Device ID

Every IPStar has its own unique ID. When using Direct-Link Mode, the user can talk to another on-line IPStar party by simply entering the six-digit ID with a leading  key. This is a non-editable field.





## Play Volume

1. Use the buttons on IPStar to scroll the menu.
2. With **PLAY VOLUME** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the level of play volume. The default setting is 5. The valid range is from 1 to 9.
4. Press  to save and exit edit mode.




## Voice Quality


1. Use the buttons on IPStar to scroll the menu.
2. With **VOICE QUALITY** displayed, press  to edit.
3. IPStar complies with ITU G.723.1 standard. Two data rates 6.3K and 5.3K are available.
4. Use the keypad on the phone or buttons on IPStar to select between the rates. The default rate is 6.3K.
5. Press  to save and exit edit mode.





## Data Control

1. Use the buttons on IPStar to scroll the menu.
2. With **DATA CONTROL** displayed, press  to edit.





3. This option allows the user to select the number of frames for each data packet. IPStar will transmit one frame in each data packet if user set this option on **LOW**. In this case, IPStar will utilized more bandwidth and receive higher reliability.
4. Use the keypad on the phone or buttons on IPStar to select from **Low**, **Medium** or **High**. The default level is **Low**.
5. Press  to save and exit edit mode.

### Jitter Delay

1. Use the buttons on IPStar to scroll the menu.
2. With **JITTER DELAY** displayed, press  to edit.
3. Jitter is the variation of delayed data experienced during the packet routing and switching over the Internet. Occasionally, the Internet traffic flow is not stable.
4. Adjust the value to **HIGH** in order to obtain a better voice quality.
5. Use the keypad on the phone or buttons on IPStar to select the setting from **Low**, **Medium** or **High**. The default rate is **Low**.
6. Press  to save and exit edit mode.





## Voice Activity Detection (VAD) Level

1. Use the buttons on IPStar to scroll the menu.
2. With **VAD LEVEL** displayed, press  to edit.
3. The VAD level is the voice volume threshold (including background noise) which is set to determine whether the voice packets will be transmitted or not.
4. Use the keypad on the phone or buttons on IPStar to select the setting from **Low**, **Normal**, or **High**. The default is **Normal**.
5. Press  to save and exit edit mode.





## On-Line Time

1. Use the buttons on IPStar to scroll the menu.
2. With **ON-LINE TIME** displayed, press  to edit.
3. On-Line Time determines the duration of the IPStar-Internet connection without being used. Note that some ISPs will automatically disconnect any user after a preset period of inactivity.
4. Press  to save and exit edit mode.





## Back Light

1. Use the buttons on IPStar to scroll the menu.
2. With **BACK LIGHT** displayed, press  to edit.
3. The LCD screen is always lit if this parameter is set to **On** or turn it off by switching this parameter to **Off**. If this parameter is set to **Automatic**, the LCD screen light is on whenever the user picks up the phone or when there is an incoming call.
4. Use the keypad on the phone or buttons on IPStar to select from these three options. The default is set on **Automatic**.
5. Press  to save and exit edit mode.





## Call Waiting (Optional)

If the user have subscribed to the call waiting service from the local telephone company, it will interfere with the Internet connection. IPStar allows the user to enter an enable code and a disable code to resolve this problem. IPStar will send out the disable code whenever the user makes an Internet call. When the Internet connection is completed, IPStar will send out the enable code to make call waiting function available again. Please check with the local telephone company to obtain these code information.

Press  to enter Call Waiting Control sub-menus.





### A. Call Waiting Disable String

1. Use the buttons on IPStar to scroll the menu.
2. Press  on **DISABLE** to enter this option.
3. Use the keypad on the phone or buttons on IPStar to input the disable code for call waiting service.
4. Press  to confirm the setting.




### B. Call Waiting Enable String

1. Use the buttons on IPStar to scroll the menu.
2. Press  on **ENABLE** to enter this option.
3. Use the keypad on the phone or buttons on IPStar to input the enable code for call waiting service.
4. Press  to confirm the setting.





### C. Exit Call Waiting Sub-Menu

1. Use the buttons on IPStar to scroll the menu.
2. Press  on **EXIT** to leave Call Waiting Control sub-menu.



### System Clock

1. Use the buttons on IPStar to scroll the menu.
2. With **SYSTEM CLOCK** displayed, press  to edit.
3. Use the keypad on the phone or buttons on IPStar to input the time. IPStar uses the 24-hour setting. The valid range is from 00:00:00 to 23:59:59.
4. Press  to save and exit edit mode.



### Auto Upgrade

This function allows the users to download new software versions via the Internet to the IPStar. Please refer to **Chapter 5 Upgrading the IPStar**.



### Exit to Main Menu

With **EXIT TO MAIN** displayed, press  to leave **System Setup** sub-menu.




# Making Internet Calls

*With DSG JustDialIT Technology, operating IPStar is a push of a button!*

The newly programmed IPStar is set to go once the configuration in Chapter 3 has been completed. There are four modes that users can select to make an Internet phone call through the IPStar as below:

- IPStar-to-IPStar Mode
- IPStar-to-Phone Mode
- Direct-Link Mode
- Direct-IP Mode

## Making an IPStar-to-IPStar Call

1. Make sure that the user and the receiving party have the IPStars connected to the Internet\*.
2. Dial the phone number as normal for any overseas or long-distance calls.
3. Once the receiving party answers, the user can switch the call to the Internet by pressing the  on IPStar. However, only one party should do so.
4. Wait for the Internet connection to be completed. There will be some messages on the LCD screen indicating the progress of the connection.
5. Hang up the phone to wait for *ringing\**, or just hold the handset.
6. Once the Internet connection has been completed, the telephone will ring. Then pick up the phone and talk over the Internet.

---

***Note:** A still "@" symbol on the LCD screen indicates that the IPStar has been successfully connected to the Internet.*

---


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***Note:** Before hanging up the phone, users must wait for the handshaking symbol "~" displayed on the LCD screen.*

---

## Making an IPStar-to-Phone Call

IPStar has the capability to communicate with other Internet Telephony products, such as DSG IP2000 Internet Telephony Gateway. In this mode, the receiving party does not need an IPStar. Make sure that the parameters in the **ITSP Setup** are set properly before using the **IPStar-to-Phone Mode**.

1. Pick up the telephone receiver.
2. Press the  on IPStar.
3. Wait for the *ready tone\**.
4. Upon hearing the ready tone, dial the phone number in the following manner:

International Call :

***[International Code] + [Country Code] + [Area Code] + [Telephone Number]***

Domestic Long-distance Call :

***[Long-distance Code] + [Area Code] + [Telephone Number]***

5. Hang up the phone and wait for ringing, or just hold the handset.
6. Once the telephone rings, pick up the phone and talk over the Internet.


---

**Note:** *Ready Tone is the audio signal to indicate that IPStar is ready for dialing or receiving an Internet call.*

---

## Using Direct-Link Mode

Direct-Link mode allows users to connect to other on-line IPStar by dialing a six-digit ID number.

1. Make sure that the receiving IPStar has successfully connected to the Internet.
2. Pick up the telephone receiver.
3. Press the  on IPStar.
4. Wait for the ready tone.
5. Upon hearing the ready tone, dial the six-digit ID of the remote IPStar in the following manner:  
***\* + [Six-digit ID of remote IPStar]***
6. Hang up the phone to wait for ringing, or just hold the handset.
7. Once the phone rings, pick up the phone and talk over the Internet.

## Using Direct-IP Mode



IPStar has the ability to communicate with other compatible Internet Telephony products, such as *DSG IP1000* and *DSG IP2000 Internet Telephony Gateways*\*. By setting the IP Address of the receiving gateway, IPStar will route the call to an extension or PSTN via these compatible gateways. There are more than one way to use the Direct-IP mode such as A) 2-Button Trigger and B) Direct-IP Address Calling.

---

**Note:** *IP1000 and IP2000 are DSG's Internet Telephony products. IP1000 is a stand-alone Internet telephony gateway and IP2000 is an NT-based Internet telephony gateway. Please check [www.dsgtechnology.com](http://www.dsgtechnology.com) for further information.*

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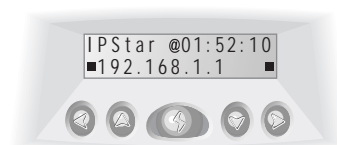
### A. 2-Button Trigger (only with initial Direct-IP Setup)

1. Make sure that the IPStar has successfully connected to the Internet.
2. Pick up the telephone receiver.
3. Press   on the telephone keypad.
4. The IPStar will try to connect to the IP Address that is setup in the Internet setup section.
5. During the connecting process, the IP Address will be displayed on the LCD screen.



### B. Direct-IP Address Calling

1. Make sure that the IPStar has successfully connected to the Internet.
2. Pick up the telephone receiver.



3. Dial the IP Address of choice. For example, to connect to the IP Address 192.168.1.1, simply dial 192\*168\*1\*1 and followed by a # to speed up the connection process.
4. The IPStar will try to connect to the IP Address that is dialed.

## Monitoring the Status of IPStar

### During an Internet Call Making

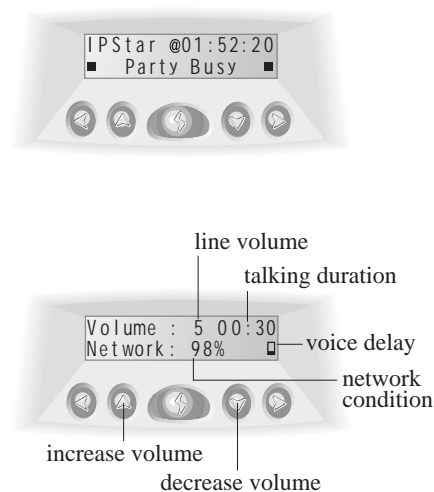
During the process of making an Internet call, if the receiving party have not answered to the call, the dialing party would hear a ring back tone to indicate that the receiving party is either away or have not answered the call.

### During an Internet Call

During an Internet call, if the receiving party is on the phone or unavailable, the LCD screen of the IPStar will display "Party Busy" and the dialing party will hear a busy tone to indicate that the receiving party is not available.

### During Talking

During an Internet call, the LCD screen of the IPStar will display:







## ■ To End an Internet Call

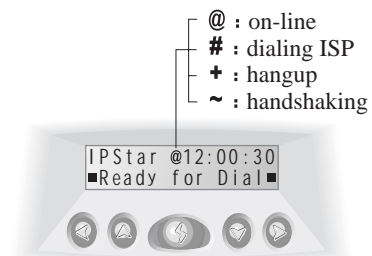
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### Volume Control

If the volume of the IPStar is too loud and there are background noises, the volume can be adjusted by pressing  or  to obtain the desired voice quality.

### During Dialup

The LCD screen of the IPStar will display the status during the ISP dialup process.




### Receiving an Internet Call

When receiving a call from another InterStar or IPStar user, the LCD screen of IPStar will display the calling party's device ID.



## To End an Internet Call



To terminate an Internet call, users may:

- Press the  on IPStar to terminate the call, or
- Perform a hook-flash to terminate the call, or
- Hang-up the phone to terminate the call.



However, the connection to the Internet still exists. Therefore, users can make another Internet phone call without re-dialing the ISP.

## To Speed-Up the Internet Disconnection

To disconnect from the Internet:

Press the  on IPStar or Simply press  on the telephone keypad.

To speed up the disconnection from the Internet:

Simply press  +  on the telephone keypad.



## Quick Internet Disconnection

All IPStar V2.50 and above have a faster Internet disconnection time. The waiting time has been reduced to 10-12 seconds. This function not only allows users to save money but also to save time.

## To Receive an IPStar Call

IPStar can accept the request of connection from other InterStars or IPStars that has been described in **Using Direct-Link Mode** earlier in this chapter. An on-line IPStar will be available for connection request from any other InterStars or IPStars. The waiting time is defined by **ON-LINE TIME** in **Configuration Mode**.

## Using the Phone Keypad to Trigger IPStar

If the users press  on the telephone keypad, IPStar will dial the ISP automatically. This feature is designed for the situation when the  on IPStar is not reachable. For example, in case if the IPStar is connected to a wireless phone.

## ■ Using the Phone Keypad to Trigger IPStar

---

# Upgrading the IPStar

*Now with the online upgrade feature, users are ensured to enjoy the latest Internet Telephony technologies without any charges!*

## Upgrade Notification




Users can upgrade the IPStar whenever a new software version becomes available. Whenever the IPStar is connected to the Internet Service Provider (ISP), DSG will notify users by displaying the message "**UPGRADE AVAILABLE**" on the LCD screen. Upgrades will enhance the performance and add more features to the IPStar. With such a convenient feature, users are guaranteed to have the most updated IPStar!

To upgrade the IPStar with the newest software version, follow the instructions below. The upgrade process will only take about three to ten minutes depending on the Internet traffic.

1. Press IPStar  button for two seconds to enter **Configuration Mode**.

## ■ Restoring Original Version

---








2. Use the keypad on the phone [\*] and [#] or buttons on IPStar to scroll the main menu.
3. With **SYSTEM SETUP** displayed, press the  button to enter the sub-menus.
4. Scroll the menu to **AUTO-UPGRADE** and press the  button.
5. With **DOWNLOAD NOW** displayed, press the  button to start the upgrading process.
6. IPStar will proceed to dial the local ISP and the LCD screen will show the progress of the downloading process.
7. Press any button to restart the IPStar. If the new software version is downloaded successfully, IPStar will reboot itself automatically.



## Restoring Original Version

IPStar has a powerful auto-recovery capability! If there is any error that occurs during the downloading process or other unexpected conditions, IPStar will automatically restore the default software version.

When users upgrade the IPStar to the new software version, IPStar will automatically store the default version as a backup. If for any reason, users wish to discard the new version and restore the default version, please follow the steps below:

1. Press the  button on IPStar for two seconds to enter **Configuration Mode**.
2. Use the keypad on the phone  and  or buttons on IPStar to scroll the main menu.
3. With **SYSTEM SETUP** displayed, press the  button.
4. Scroll the menu to **AUTO-UPGRADE** and press the  button.
5. Scroll the menu to **RESTORE** and press the  button to start the restoring process.
6. After the completion of restoring process, press any button to exit the sub-menu.
7. Use buttons on IPStar to scroll to **EXIT TO MAIN** and press the  button.



## ■ Restoring Original Version

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# How to Get an ITSP Account (*IPStar-to-Phone Mode*)

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*IPStar is the first Internet Telephony Phone appliance in the world that provides Device-to-Phone capability! An IPStar is all that is necessary for huge savings on Long-Distance or International calls!*

The DSG Internet Telephony Network is an integrated telephony system based on Internet environment that provides various services such as **Phone-to-Phone**, **IPStar-to-Phone**, **Internet Fax** etc. The **IPStar-to-Phone** mode allows the IPStar to connect to a compatible gateway, such as DSG IP2000 Internet Telephony gateway, so that the receiving party is able to receive an Internet phone call with any regular phone. In order to use IPStar-to-Phone mode, users have to get a valid Internet Telephony Service Provider (ITSP) account and enter the *required information\** into the IPStar.

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**Note:** Before using **IPStar-to-Phone** mode, make sure that all related information required in the **ITSP SETUP** section have been entered. Please refer to **Chapter 3 IPStar Configuration Mode** for details.

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## ■ Checking the ITSP Account Balance

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There are three ways to get an ITSP account:

- There is a default account with the purchase of IPStar, and have the dealer or retail store add a value to the account or
- Apply for a new prepaid account from the dealer or retail store and enter the account number into the IPStar or
- Apply for an account through the Internet

Check the web site ***www.dsgtechnology.com*** periodically to get the information about compatible ITSP list and other *Internet Telephony Services\**. The DSG web site will direct users on how to apply for a valid account from our ITSP partners. Users would also have access to new information such as calling rates on the LCD screen of the IPStar periodically when making an Internet call.

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**Note:** DSG is a system provider of Internet Telephony solutions and does not provide any telephony services. DSG will not take responsibilities for using these services.

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## Checking the ITSP Account Balance

IPStar has a built-in account balance function. Users may check their account balance in the comfort of their own home!

To check the default ID Account Balance (the default account), follow the steps below:

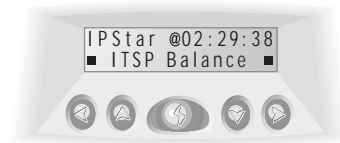
1. Make sure that the IPStar has successfully connected to the Internet.
2. Pick up the telephone receiver and dial [\*] + [99] + [#].
3. The balance of the account will be shown on the LCD screen.



## ■ Checking the ITSP Account Balance

To check an ITSP Account Balance (the purchased account or the account obtained through the Internet), follow the steps below:

1. Make sure that the IPStar has successfully connected to the Internet.
2. Pick up the telephone receiver and dial [\*] + [88] + [#].
3. The ITSP account balance will be shown on the LCD screen.



## Appendix A. Technical Specifications

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Dimensions	196mm x 140mm x 47mm ( 7 7/10" X 5 1/2" X 1 4/5" )
Weight	Approximately 600g ( 1.3Lbs. )
Power Input	AC100-120V or AC200-240V
Temperature	0-50°C ( 32°F~122°F )
Humidity	10% to 90% non-condensing
Internal RAM	2Mbytes
Flash Memory	1Mbytes
Internal Modem	ITU-T V.34, 33, 600bps
LCD Display	16 x 2 with back light
Telephone Interface	two RJ11 jacks to line and phone
Voice Compression	G.723.1 compliant
Internet Protocols	TCP/IP, PPP, PAP, CHAP

## Appendix B. Troubleshooting


### Configuration Problems

***An ISP Test was performed and the LCD screen displayed [Failure...Wait].***

First, make sure that the ISP Phone Number, ID and Password are entered correctly. Once the data is accurately entered into the IPStar, run the ISP Test. Normally, this test will take no longer than 60 seconds. If the ISP Test failed, try to run the test a few more times. If there is still any trouble with running the test, it is possible that the local ISP might have been heavily congested. Try to run the test again later.

### Problems Making an IPStar-to-IPStar Call

***An attempt to make an IPStar-to-IPStar call but it did not work.***

Use the quick start guide, check that both IPStars are configured properly and have passed the ISP Test. During the process of making an IPStar-to-IPStar call, check for an online symbol "@" on the LCD screen of the IPStar to confirm the online status. When one of the IPStar users presses the  button, the receiving IPStar user ought to wait for the hand-shake symbol "~" before hanging up the telephone. If several attempts were made and the line quality cannot seem to support the hand-shake process, try using the Direct-Link mode to make the call.

### Problems Making an IPStar-to-Phone Call

***The phone number was entered and the LCD screen displayed "Ready for Dial".***

The phone number was entered and the LCD screen displayed "Ready for Dial". Check to see if the ITSP Account Number is entered correctly. For more information on ITSP Account, please refer to **Chapter 6 How to Get an ITSP Account** for details.

***The phone number was entered and the LCD screen displayed "No Service".***

It is necessary to input the Country code, Long-Distance code, and International code correctly when making an IPStar-to-Phone call because the IPStar uses these information to analyze the phone number dialed. Another possibility that might have caused the "No Service" is that the number dialed is out of the service area. For information on all available countries, please refer to our web site [www.dsgtechnology.com](http://www.dsgtechnology.com).

***The phone number was entered and the LCD screen displayed "Wrong Account".***

When the screen displays "Wrong Account", it's either that an invalid ITSP Account has been entered, or there is no balance remaining in the ITSP Account. To apply, renew, or to re-activate an ITSP Account, please contact the local distributor or visit the web site [www.dsgtechnology.com](http://www.dsgtechnology.com) for more detailed information.

***The phone number was entered and the LCD screen displayed "Server Busy".***









When the screen displays "Server Busy", that means all the lines are busy and temporarily unavailable. Try to call again later.

## Problems Making a Direct-Link Call


***No clue on finding the IPStar's six-digit ID.***

The six-digit ID can be identified at the bottom of the IPStar. In the configuration mode **SYSTEM SETUP - DEVICE ID**, the six-digit ID can also be found. Please refer to **Chapter 3 IPStar Configuration Mode** for details.

***The IPStar's six-digit ID was entered and the LCD screen displayed "Ready for Dial".***

A leading  key is probably left out before entering the six-digit ID. For example, when making a Direct-Link call to a receiving IPStar ID 001234, enter  during the "Ready for Dial" mode in order to make the call.

***The IPStar's six-digit ID of the receiving party was entered and the LCD screen displayed "Party Off Line".***


Before making a Direct-Link call, confirm that the six-digit ID of receiving IPStar is entered correctly. At the same time, the receiving IPStar must be connected to the Internet. If the receiving IPStar has not connected to the Internet at the moment, try it again later. If the receiving IPStar is still offline, the caller should notify the receiving party to pick up the handset and press the  button on the IPStar to connect to the Internet.

## Problems during an Internet Call

### ***During the call, there is a slight delay while conversing.***

This is an expected Internet phone situation. The degree of voice delay depends on the Internet traffic and the routing path. IPStar's Dynamic Jitter Buffer Control algorithm will optimize the delay time automatically in the first ten seconds of the call.

### ***During the call, it is difficult to hear the other party.***

The Network Percentage Indicator on the LCD screen allows the user to monitor and to identify if the Internet traffic has become congested. The user may wait to see if the traffic subsides or press the  button to terminate the call and try to place the call later. If the call cannot be terminated successfully, switch off the power to reset the IPStar and place the call again.

### ***During the call, the other party's voice seems slowed or delayed seriously (more than three seconds).***

The bandwidth between the user's IPStar and the local Internet Service Provider (ISP) is not enough to support a regular Internet call. Please terminate the Internet connection and try to place the call again to see if the voice quality has improved. If there is no improvement, then change to another phone line to see if there is any enhancement of the voice quality. If the voice quality does not improve, try to set DATA CONTROL in the Configuration Mode to High and place the call again.

### ***If there are still other problems other than the ones stated above.***

It is recommended that users should try to use other Internet Service Providers (ISPs) to secure the best Internet connection quality.

## Problems Terminating the Internet Connection

### ***The button was pressed to terminate the Internet connection but the LCD screen kept displaying "Please Wait".***

IPStar will initiate a connection to DSG IPStar Server before terminating the Internet connection. If the "Please Wait" message is displayed for over 30 seconds due to the congested Internet traffic, then turn off the power to reset the IPStar.