DVX-2004

Small and Medium Business IP-PBX VERSION 1.00

USER MANUAL





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The information contained in this document is subject to change at any time without prior notification. If you want to learn more info about our product, please visit our web www.Dlink.com

Chapter1 Safety Notice

Please read the following safety notices before installing or using this IP PBX. They are crucial for a safe and reliable operation of the device.

- Please use the external power supply which is included in the package. Other power supplies may cause damage to the device, affect the performance or induce noise.
- Before using the external power supply in the package, please check with residential power voltage. Inaccurate power voltage may cause fire and damage.
- Please do not damage the power cord. If power cord or plug is impaired, do not use it, otherwise, it may cause fire or electric shock.
- The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.
- Do not drop, knock or shake it. Rough handling can break internal circuit boards.
- Do not install the device in places where there is direct sunlight. Also do not place the device on carpets or cushions. It may cause fire or breakdown.
- Avoid exposing the device to high temperature, below -10°C or high humidity. Avoid wetting the unit with any liquid.
- Do not attempt to open it. Non-expert handling to the device could damage it. Consult your authorized dealer for help, or else it may cause fire, electric shock or breakdown.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it. Wipe it with soft cloth that has been slightly dampened in a mild soap and water solution.
- When lightning, do not touch power plug or phone line, it may cause an electric shock.
- Do not install this device in an ill-ventilated place.
- You are in a situation that could cause bodily injury. Before you work on any
 equipment, be aware of the hazard involved with electrical circuitry and be familiar
 with standard practices for preventing accidents.

Chapter2 Brief Introduction

2.1 Brief introduction of DVX-2004

The all-in-one DVX-2004 IP PBX can not only provide the traditional basic PBX features(call hold, call forwarding, call waiting and so on), but also provide enhanced features such as visual operator, voice mail to mail, multi-media music on hold, and auto attendant, etc. In addition, it's very convenient for SMEs' management and maintenance, also easy to upgrade. SMEs can set up own phone system to improve the company image and office efficiency.

Main Features

- 30 Concurrent calls
- Up to 100 registers
- Video Calls
- Multiple Language
- DID(Direct Inward Dialing Number)
- Support SKYPE for SIP
- Support USB disk recording
- Call Monitoring
- Codec: G.711-Ulaw,G.711-Alaw,G.726,G.729
 GSM,SPEEX,H.261,H.263,H.263+,H.264
- Caller ID/ Call Hold/ Forward/ Transfer/ Waiting/ Parking
- Call Paging and Intercom
- Call Queue
- Black List/ Phone Book
- Music On Hold
- DISA(Direct Inward System Access)
- Flexible Dial Plan
- Ring Group/ Conference Room
- Call Logs
- BLF(Busy Lamp Field)
- Auto Provision
- Feature Codes
- Follow Me
- Configuration By web
- Built-in SIP/IAX2 server
- Build-in voice mail server
- System Backup and Restore
- Echo Cancelation/VAD
- Support Static/DHCP/PPPOE
- VPN Client(Support N2N)
- DDNS Client(Support dyndns.org /no-ip.org /zoneedit.com)
- Support NTP(Network Time Protocol)

2.2 Hardware Structure

Here, we take DVX-2004G as the sample to show the interface and the indicators at the front and back panel.

2.2.1 Back Panel



- 4 GSM Antennas
- 2 Network Interface (RJ45)
- 1 Power Interface (DC 12V 2A)
- 1 Reboot Button

2.2.2 Front Panel



Mark	Function	Status	Description
PWR	Power Status	On	Power On
		Off	Power Off
SYS	System Status	On	System working
313		Off	System Failed

WAN	WAN interface Status	Wink	Data exchanging
VVAIN	WAIN IIILEITACE Status	Off	No Data exchanging
LAN	LAN Interface Status	Wink	Data exchanging
LAN Interface Status		Off	No Data exchanging
C1: C1	GSM Modules Status	Red	GSM channel
G1~G4 GSM Modules Status		Off	Failed
	Analog Modules Status	Green	FXS channels
*1-4		Red	FXO channels
		Off	Failed

2.2.3 Hardware:

- 32bit embedded RISC DSP
- 1G Onboard Nand Flash
- 128M Onboard SDRAM

2.2.4 Environmental Requirements:

• temperature: -10 °C -45 °C

• Storage temperature: -30 °C -65 °C

• humidity: 10-80% no dew

• Power: AC 100~240V

2.2.5 Packing List

•	DVX-2004 IP PBX	1 Unit
•	Power Adapter	1 Unit
•	Quick Start Guide	1 Piece
•	CD	1 Piece
•	Product Maintenance Card	1 Piece
•	Antenna(Only for DVX-2004G)	4 Piece

Chapter3 Basic Configuration

3.1 Preparation Before Operation

What kind of IP Phone can be used with DVX-2004 IP PBX? FXS Interface

Analog Phone(normal phone)

SIP Extension

- DPH-150 , DPH-400
- IP Phone which support SIP/ IAX2 protocol.

3.2 Before Making a Call

3.2.1 Login IP PBX

Getting IP Address

DVX-2004 IP PBX support 3 Ways to get the IP Address: Static/ DHCP/ PPPoE Default IP and Port of WAN & LAN:

- WAN Port IP: http://192.168.1.100:9999
- LAN Port IP: http://192.168.10.100:9999
- LAN Supper IP: 169.254.1.254/255.255.0.0

Default configuration and function key

- Web GUI username: admin
- Web GUI password: admin
- **11 Play the IP Address of WAN port
- **12 Play the IP Address of LAN port
- 600 Enter into the Voicemail Box
- 900 Enter into the Meeting
- # Blind Transfer
- *2 Attended Transfer
- * Disconnect Call

Login to the system

After connecting the IP PBX to the local area network, launch the web browser on a computer which is in this local area network. Enter the IP address of the system (WAN port IP address http://192.168.1.100:9999, LAN port IP address http://192.168.10.100:9999). The start web page will appear like this:

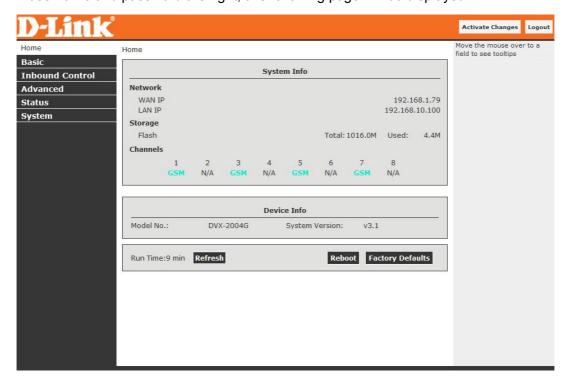


Enter Username and password (default username is **admin**, password is **admin**), then click "login". Once the login is successful, the home page will be displayed:



- 1) You have to add a network segment same with the WAN port if your PC is not at 192.168.1.XXX.
- 2) For safety requirement, please modify the username and password after you login. You can modify in this page: "System"---"Management"
- 3) Generally, based on the default setting, if user didn't do anything in 1 min after login, system will reflect it's over time. If you want to continue operating, please login again.

If username and password are right, this following page will be displayed:



- Network
 WAN/ LAN Port IP will be displayed
- Storage Total storage and used storage will be displayed

Channels Channel information will be based on the product model

• Device Info Product Model and System Version will be displayed

Common Button

Besides of the device info in the home page, the following common buttons are displayed as well:

Log out GUI

Reboot
 Reboot the IP PBX system

Factory Defaults
 Restore all settings to factory default

Activate Changes Activate the changes for your current configuration

System Menu

System Menu include the following sub menu:

Home Page Display device info

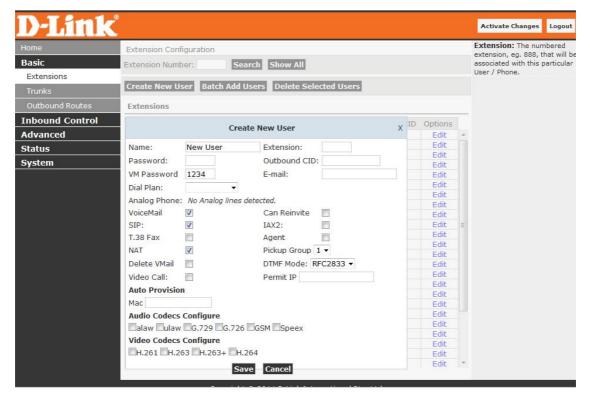
Basic Basic configuration on extension, trunks, etc
 Inbound Control Configure Inbound Route, IVR and Black List, etc
 Advanced Configure extension's default info, conference, etc.
 Status Check record list, call logs, register status, etc here.

System Configure network, time, etc; manage call logs, back up files, etc

3.2.2 Basic Configuration

Configure Extensions

D-link IP PBX support SIP/IAX2 and analog extension, configure extension from this page:
[Basic] ---- [Extensions] ---- [Create New User]



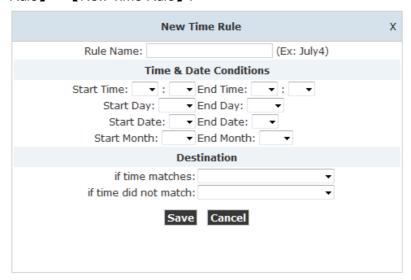
Item	Explanation
Search	Search extension precisely or fuzzily
Show all	Show all extensions
Name	Extension name (English letter is supported only) eg: "Tom"
Extension	Be connected to the phone eg: "888"
Password	Password of SIP/IAX2 extension eg: "12u3b6"
Outbound CID	Overrides the caller id when dialing out with a trunk.
VM Password	Voicemail Password for this user, eg: "1234".
E-mail	The e-mail address for this user, eg. "Tom@gmail.com"
Diel Dien	Please choose the Dial Plan for this user, Dial Plan is defined
Dial Plan	under the "Outbound Routes".
Analag Dhana	If this user is attached to an analog port on the system, please
Analog Phone	choose the port number here.
Voicemail	This user will have a voicemail account after choosing this option.
	Set up calls directly between caller and receiver, after being
Can reinvite	connected by IP PBX system. This method is known to cause
Carrientvite	problems with certain hardware, such as the common Cisco ATA
	186.
SIP	Check this option if the User or Phone is using SIP or is a SIP
- OII	device.
IAX2	Check this option if the User or Phone is using IAX2 or is an IAX2
1/-//2	device.
T.38 Fax	Enables T.38 fax (UDPTL) pass through on SIP to SIP calls
Agent	Check this option if this User or Phone is an Call Agent.
NAT	Check this option if the User or Phone is located behind a NAT
147.11	(Network Address Translation) enabled gateway.
Pickup Group	Select your pickup group.
	Voicemail will not be checkable by phone if you choose this option.
Delete VMail	Messages will be sent by email only.
	Note: You must configure SMTP server for this functionality.
DTMF Mode	The Dual-Tone Multi-Frequency mode to be used is specified here
Divil Wode	and can be changed if necessary. The default is rfc2833.
Video Call	Enable/Disable Video call for this extension
Permit IP	IP address and network restriction.
	eg: "192.168.1.77" or "192.168.10.0/255.255.255.0"
Auto Provision	Enter the MAC address of the specified extension, the system will
	automatically create the config file accordingly. (Just support
	DPH150 and DPH400 IP Phone)
Codecs Configure	The allowed and disallowed codecs can be selected by clicking this
Codecs Configure	link. Default codecs are alaw, ulaw and G.729.



- 1) There are 30 default extensions which number started with "8", you can add or delete extension by your requirement.
- 2) As our professional suggestion, extensions don't exceed 100. If extensions were over 100, it will cause the system crashed or other problems.

3.2.3 Time Based Rules

You can set working time rule and after-working time rule, and deal with your inbound call based on this time rule. Please set from this page: [Inbound Control] --- [Time Based Rule] --- [New Time Rule]:



New Time Rule:

Item	Explanation
Rule Name	Define the time rule name.
Time & Date Conditions	Set time segment of Month/Date/Week.
Destination	How to deal with the inbound call in different time segment
Destination	eg: Inbound call will be forward to IVR in working time.

3.3 Outbound Call

3.3.1 Trunks

If you want to set up outbound call to connect to PSTN(Public Switch Telephone Network) or VoIP provider, please configure on this page: 【Basic】->【Trunks】

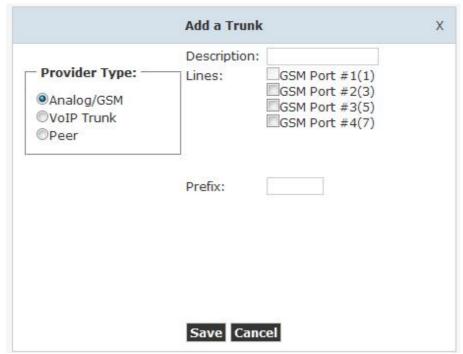


D-link IP PBX support 3 kinds of trunks: Analog/GSM line, Custom VoIP, Peer.

How to add each trunk:

1) Analog/ GSM Line

Click 【Add a Dial Rule】->【Analog/GSM】

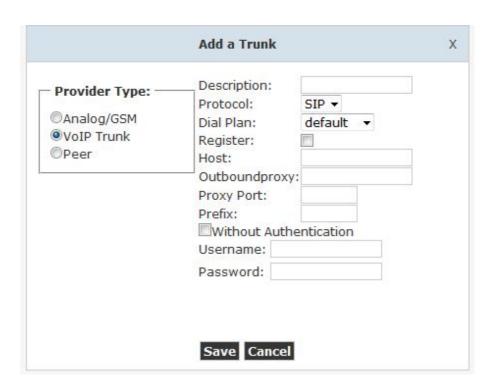


Item	Explanation
Description	Define description for the trunk.
Lines	Individual lines of the PBX
	eg: Analog Port #3: The third analog port of the PBX.

You can configure the Analog/GSM line through D-LINK IP PBX. Same Analog line couldn't be used in multi trunks. If you don't have available Analog/GSM trunk, you can't set up trunk.

3.3.2 Custom VoIP

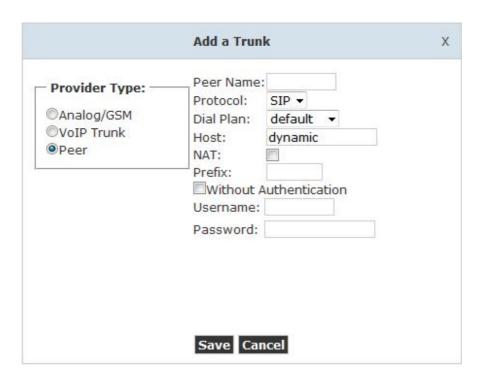
Custom VoIP allows you to create a VoIP trunk, please configure on this page: 【Add a Trunk】 -> 【VoIP Trunk】



Item	Explanation
Description	Description for VoIP Trunk, digit or letter is allowed.
Protocol	Choose protocol for this trunk, SIP or IAX2
Dial Plan	Choose a dial plan for this trunk, define it in the submenu named
Diai Pian	【Outbound Routes】.
Register	Check for opening register service; otherwise register service is
Negistei	closed
Host	Host Address provided by VoIP Provider.
Outbound proxy	Outbound proxy is provided by VoIP Provider.
Proxy Port	Proxy Port is provided by VoIP Provider.
Without	If you don't use Authentication when connecting server, pls check
Authentication	this option.
Username	Username provided by VoIP Provider.
Password	Password provided by VoIP Provider.

3.3.3 Peer

D-LINK IP PBX will be taken as a Client when you use "Peer", it's used for outbound call by connecting to another DVX-2004 IP PBX.



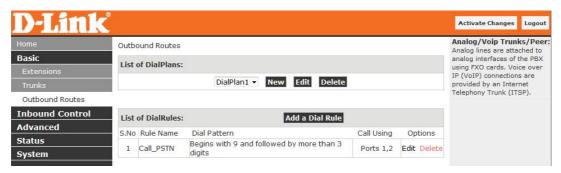
Item	Explanation
Peer Name	Define the Peer Name, digit or letter is allowed.
Protocol	Choose protocol for this trunk, SIP or IAX2
Dial Diag	Choose a dial plan for this trunk, define it in the submenu named
Dial Plan	【Outbound Routes】.
Host	IP Address of the other DVX-2004 IP PBX
NAT	Check this option, extension user will be configured after NAT
NAT	(Network Address Translation).
Without	If you don't use Authentication when connecting server, pls check
Authentication	this option.
Username	Username provided by the other DVX-2004 IP PBX.
Password	Password provided by the other DVX-2004 IP PBX.

Once A trunk is added, this trunk will be displayed in the "List of Trunk". You can define the codecs, configure advanced settings or delete this trunk from the drop downs of "Option"

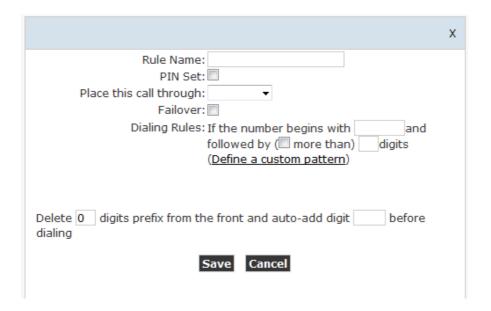
3.3.4 Outbound Routes

Outbound Routes is to define what trunk is used for outbound call by extension user. If you don't allow extension user call out, please ignore this part.

Please configure on this page: 【Basic】->【Outbound Routes】



On this page, you can configure basic match pattern of outbound routes and create different dial plan. Please configure by clicking 【Add a Dial Rule】



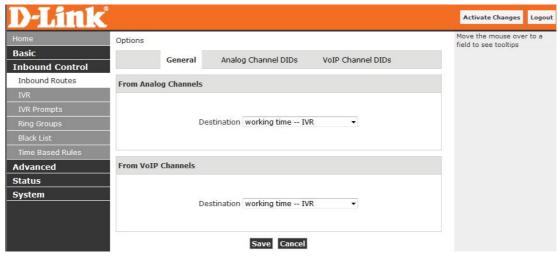
Item	Explanation		
Rule Name	Set a name for this dial rule		
PIN Set	Set PIN which you need input when you dial out by this rule.		
Place this call through	Choose a trunk for this rule		
Failover	Choose a failover trunk for using when the above chosen		
rallovel	trunk is not available.		
Dialing Rules	Define the number match pattern for dialing.		
	N digit from 2 to 9		
Define a custom pattern	Z digit from 1 to 9		
Define a custom pattern	X digit from 0 to 9		
	. One digit or multi digits		
Dolotof Idigite profix	If deleted one digit prefix, when dial 12345, digit 2345 will be		
Delete[]digits prefix	sent.		
Auto-add digit[]	If added digit"1", when dial 12345, digit 123451 will be sent.		

3.4 Inbound Call

3.4.1 Inbound Routes

When a call from outside, you want to forward this call to an extension or IVR, this Chapter will introduce you how to deal with the inbound calls.

Please configure on this page: [Inbound Routes]

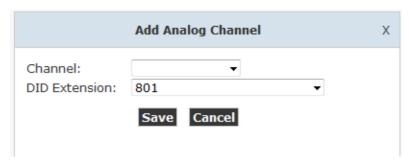


General

When a call from a trunk (Analog/ VoIP), it could be forwarded to an extension, call queue, conference or IVR. You can choose based on your requirement.

Analog Channel DID

If you want to direct the inbound call from a trunk (Analog) to a specified extension, call queue, conference or IVR, please configure on this page: 【Add Analog Channel】



- Channel Choose Analog Port of trunk
- DID Extension Select Extension, call queue, conference or IVR for DID.

VoIP Channel DID

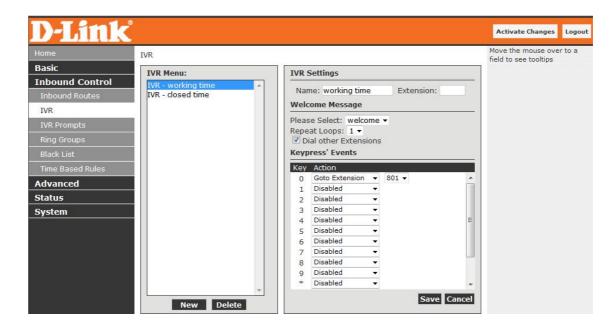
If you want to direct the inbound call from a VoIP trunk to a specified extension, call queue, conference or IVR, please configure on this page: 【Add VoIP Channel】



- DID Number DID number calling into VoIP (This number is configured in the advance option of VoIP trunk)
- DID Extension Choose a specified extension, call queue, conference or IVR to be directed to call.

3.4.2 IVR

IVR will improve office efficiency based on your requirement. Please configure on this page 【IVR】



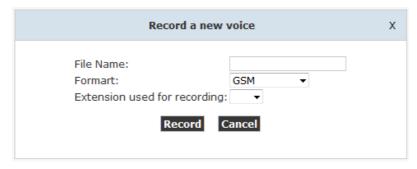
Item	Explanation
Name	Set a name for the IVR
Extension	If you want to listen to the IVR by dialing extension, please
Extension	input an extension Number.
Please Select	Select IVR audio file, please configure in this page:
Flease Select	【IVR Prompts】
Repeat Loops	loop times to repeat playing the IVR prompt.
Dial other Extensions	Allow caller to dial other extension besides of the ones listed
	as below.
Keypress' Events	Each digit will be related to the actions defined in the blank.

3.4.3 IVR Prompts

Record or play IVR music from extension. Please configure on this page: [IVR Prompts]



Click [Record a new voice] to display the diagram as below:

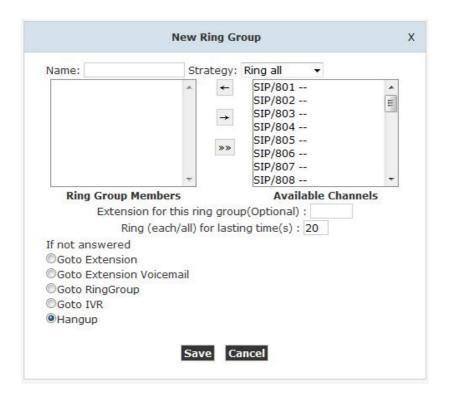


- File name Define a name for the recorded IVR file
- Format Choose the format of the voicemail messages in this selection box.
- Extension used for recording Select an extension for recording, click [Record] button, the selected extension will ring, then you can record IVR.

3.4.4 Ring Groups

Ring Group is a collection of extensions. When a call to a ring group, all extensions in this ring group will ring in different way based on their different configuration, if ring time exceeded defined time, the call will be directed to IVR or others based on your configuration.

There isn't any data in the factory default 【Ring Groups】, please configure as below: Click 【New Ring Group】 to display the diagram as below:



• Name Define a name for this ring group

Strategy : "Ring all" or "Ring in order"

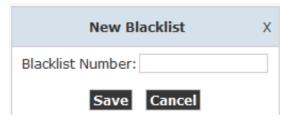
Ring Group Members Select ring group members in available channels,
 click to add.

• If not answered You can choose forward the call to extension, extension, Voicemail, RingGroup, IVR or Hangup.

3.5 Black List

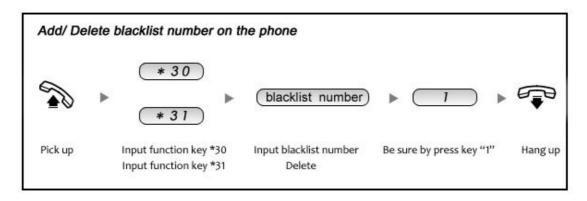
If some numbers need to be blocked, you can use this functionality.

Please configure in 【Black List】, click 【New Blacklist】 to display this dialog as below:



Input caller's number in the blank, then this caller's number will be blocked when call again. Meanwhile, extension user can add or delete the blacklist number by function key on the phone.

Please operate as the following diagram:

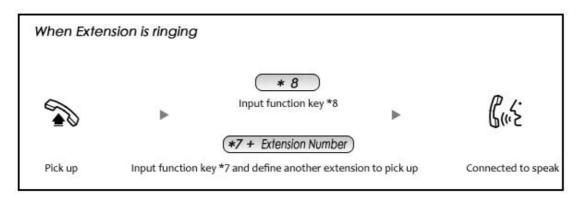


Reference Parameters and Explanation of Blacklist:

Item	Explanation
*30	When the extension user (in the system) input *30 to add a
	blacklist number, this number will be added to the "Black List"
*31	When the extension user input *31+ blacklist number, this number
	will be deleted from the "Black List".

3.5.1 Pickup Call

If an extension user is away from his/her desk, other extension users can pickup the call by function key on the phone. Please check the following diagram to learn:



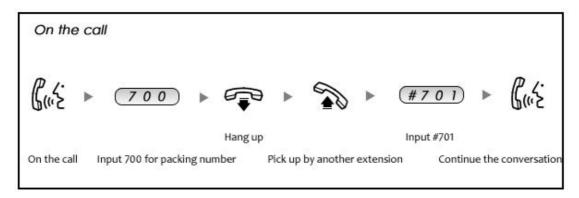
Reference Parameters and Explanation of Pickup Calls

Item	Explanation
*8	Pick up the ringing extension (in the system) at random. This can
0	be defined in 【Feature Codes】
*7	Defined extension number must be inputted after *7. This can be
/	defined in 【Feature Codes】.

3.6 On The Call

3.6.1 Call Parking

If you picked up a call at your seat, but it's not convenient to talk in public, you need go to the conference room to talk secretly. At this time, you can input 700 to park this call, the system will tell you a parking number 701 which you can input for continuing conversation when you go to the conference room. Please check the diagram as below to learn:

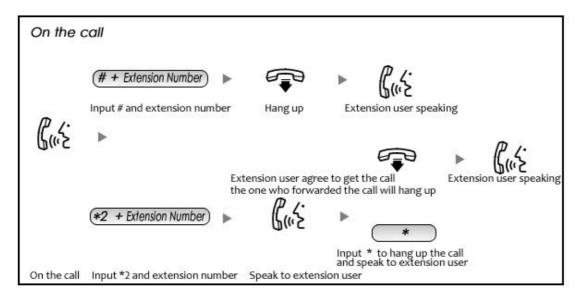


Reference Parameters and Explanation of Call Park:

Item	Explanation
Extension to Dial	Default number is 700. It can be defined in 【Feature Codes】
for Parking Calls:	Default number is 700. It can be defined in [Feature Codes]
What extension to	Default number is 701-720.lt can be defined in [Feature Codes]
park calls on	
How many	
seconds a call can	Default is 45 seconds. It can be defined in 【Feature Codes】
be parked for	

3.6.2 Transfer

If an incoming call asked to speak to your colleague, you can transfer the call directly to your colleague or transfer the call after agreed by your colleague. Please check the diagram as below to learn:

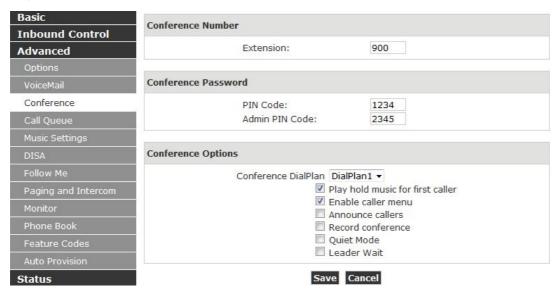


Reference Parameters and Explanation of Transfer:

Item	Explanation
Blind Transfer	Default is #, it can be defined in 【Feature Codes】
Attended Transfer	Default is *2, it can be defined in 【Feature Codes】
Disconnect Call	Default is *, it can be used after you use function key " *2 ".
	it can be defined in 【Feature Codes】
Timeout for answer on	Default is 15 seconds, it can be defined in [Feature Codes]
attended transfer	Default is 15 seconds, it can be defined in Feature Codes

3.6.3 Conference

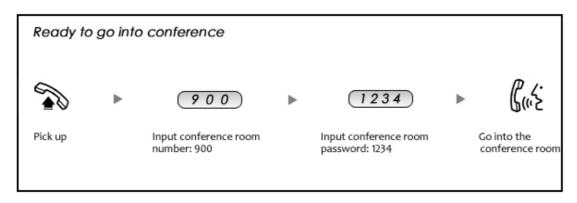
If you wanted to create a conference room for some extension users or with external lines, you can input conference room number 900, input conference room password 1234 (Admin's password is 2345), then enter into conference room. Please configure on this page 【Conference】:



Item	Explanation	
Conference Number	The number that users call in order to access the	
Conference Number	conference room, the default number is "900".	
PIN Code	Participants enter the conference room by this code.	
Admin PIN Code	Administrator enter the conference room by this code.	
Conference DialPlan	Use the dialplan when you invite the other participant.	
Dlay hold music for first	Check this option, Asterisk will play Hold Music to the first	
Play hold music for first	user in a conference, until another user has joined the	
caller	same conference.	
	Checking this option allows a user to access the	
Enable caller menu	Conference Bridge menu by pressing the * key on their	
	dialpad.	
Announce callers	Checking this option announces to all Bridge participants,	
	the joining of any other participants.	
Record conference	Recording format is WAV.	
	If this option was checked, all users entering this	
Quiet Mode	conference will be marked as quiet, and will be in	
	Listen-Only mode.	
Loador Wait	Wait until the conference leader (admin user) arrives	
Leader Wait	before starting the conference.	

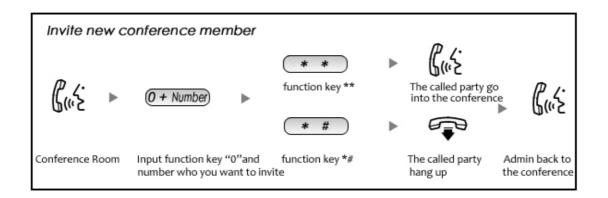
Please check the following diagram to learn:

Go to conference:



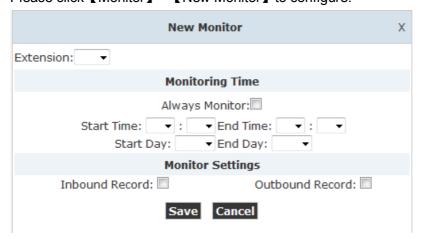
In the conference, admin can add new participant (extension user or external number) into the conference.

Add new participant:



3.6.4 Monitor

Monitor the specified extension, also you can monitor in different time. Please click [Monitor] -- [New Monitor] to configure:



Item	Explanation
Extension	Select an extension which need to be monitored
Monitoring Time	Always monitor or monitor in different time.
Monitor Settings	Set inbound record and outbound record.

3.7 Settings before leaving office

3.7.1 Follow Me

If you don't want to lose any call, you can use this function.

Please click [Follow Me] --- [New Follow Me]

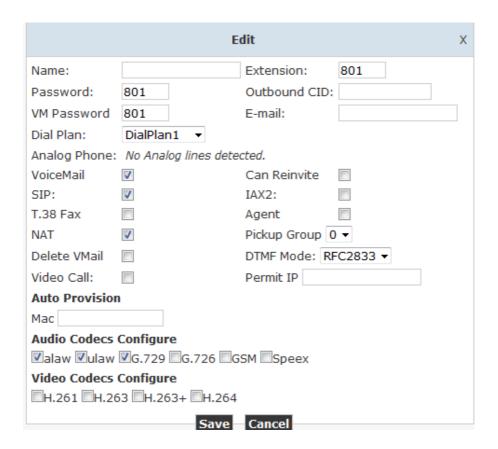


Item		Explanation
Extension		Choose an extension
Ring lasting for(s)		Default is 20 seconds, you can define it by yourself.
	Always	All incoming calls will be forwarded
Status	Busy	Forward when extension is busy
	No answer	Forward when extension not answer
Set your Extension extension.	Incoming call will be forwarded to internal	
	Extension	extension.
	Forward to an External	Incoming call will be forwarded to external
Tiurribei	Extension	number or mobile number.
Set Internal Extension		Set an internal extension to pick up the call.
Select DialPlan		Select DialPlan when forward the call to
	Select DialPlan	external number.
Set External Number		Set external number, like Mobile number.

3.7.2 VoiceMail

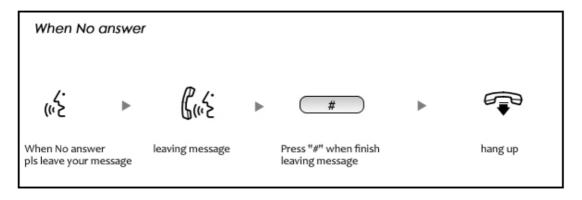
If you don't want to configure "Follow Me", you can record the message of incoming call, and email the message to your defined mailbox.

Click [Extension] --- [Extension Settings]

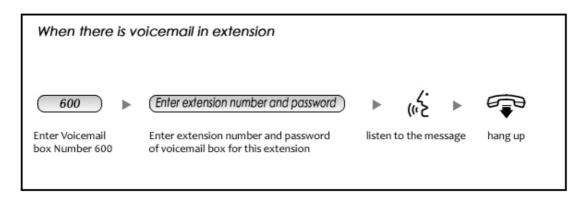


[VoiceMail] must be opened and [VM Password] must be configured before using "VoiceMail". If no answer, when default ring time is over, the system will play and ask you to leave your message, press # to end recording. If you configured email, your voice message will be sent to your defined email.

Leave a message:



Listen to the message





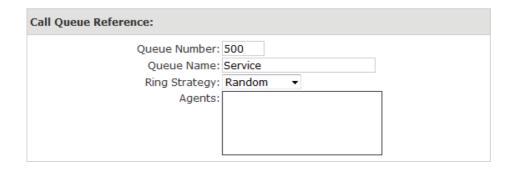
Note:

- 1) If you would like using this function, you must write correct email address in "extension settings"
- 2) You need configure SMTP and Email model in 【VoiceMail】, please check the details in the following chapter 【VoiceMail】

3.8 Call Queue

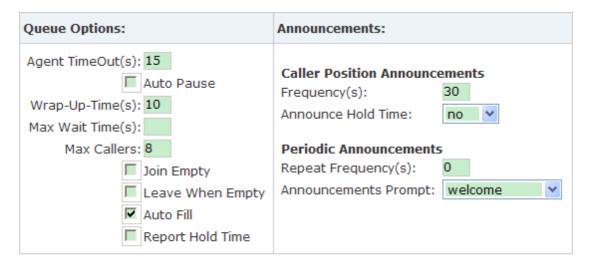
3.8.1 Create Agent

Check agent in the 【Extension Settings】---【Advanced Options】, then assign agent and Ring Strategy in 【Call Queue】, please learn from the following configuration interface:



Item	Explanation
Queue Number	This option defines the extension number that may be
Queue Nullibel	dialed to reach this Queue.
Queue Name	This option defines a name for this Queue, eg. "Sales"
	RingAll Ring All available Agents until one
Ring Strategy	answers(default).
	RoundRobin Take turns ringing each available Agent.

	LeastRecent Ring the Agent which was called least
	recently.
	FewestCalls Ring the Agent with the fewest completed
	calls.
	Random Ring a Random Agent.
	RRmemoryRoundRobin with Memory, and remember
	where it left off in the last ring pass.
Aganta	All the users who is defined as Agent will be shown here.
Agents	Selected agent will be a member of the current Queue.



Note:Each agent needs to login to the queue using the login extension defined in Feature Codes.

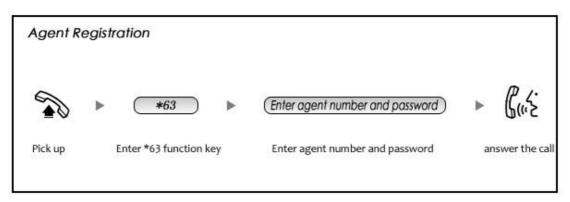
Item	Explanation	
Agent TimeOut(s)	This option defines the time in seconds that an Agent's	
Agent nineOut(s)	phone rings before the next Agent is rung, eg. "15"	
Auto Pause	Pause an Agent if they fail to answer a call.	
	After a successful call, how many seconds needed to wait	
Wrap-Up-Time(s)	before sending another call to a potentially free agent	
, , ,	(Default is 0, which means No Delay).	
Max Wait Time(s)	The maximum number of seconds a caller can wait in a	
	queue before being pulled out(empty for unlimited).	
Max Callers	This option sets the maximum number of callers that may	
	wait in a Queue(Default is 0, Unlimited).	
Join Empty	Defining this option allows callers to enter the Queue when	
	no Agents are available. If this option is not defined, callers	
	will not be able to enter Queues with no available agents.	
	Defining this option forces all callers to exit the Queue if New	
Leave When Empty	Callers are also not able to Enter the Queue. This option	
Leave when Emply	should generally be set in concert with the "Join Empty"	
	option.	

	Deficient this configuration of the Oracle State of the Oracle Sta
	Defining this option causes the Queue, when multiple calls
	are in it at the same time, to push them to Agents
Auto Fill	simultaneously. Thus, instead of completing one call to an
	Agent at a time, the Queue will complete as many calls
	simultaneously to the available Agents.
Donort Hold Time	Check this option if you wish to report the caller's hold time
Report Hold Time	to the agent member before they are connected to the caller.
Fraguenov(a)	How often to announce queue position and estimated
Frequency(s)	holdtime(0 to Disable Announcements).
	Should we include estimated hold time in position
Announce Hold Time	announcements? Either yes, no, or only once; hold time will
	not be announced if <1 minute.
Dencet Frequency(s)	How often to announce a voice menu to the caller(0 to
Repeat Frequency(s)	Disable Announcements).
Announcements	Coloct the Managements Drampti from IVD Drampts
Prompt	Select the 'Announcements Prompt' from IVR Prompts

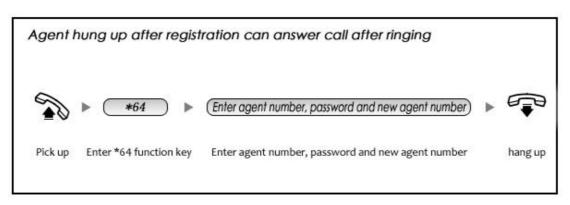
3.8.2 Agent Registration

You need register for using after creating agents.

Agent Registration when hook off



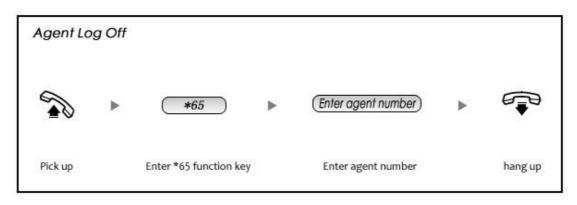
Agent Registration when hook on



3.8.3 Agent Log Off

If agent would leave and log off, none of agent will answer calls then.

Agent Log Off:



Chapter 4 Advanced

4.1 Options

Options Include local extension settings and new extension default settings. Click 【Option】 to display the diagram as below:

	Local Extensions are Varying ▼	
	Operator Extension:	-
	Global Ring Time Set(s): 30	
	Enable Transfer: ▼	
	Enable Music On Ringback:	
	Allow multiple extensions to b	e assigned to one analog phone
	Allow extensions to be Alphal	Numeric (SIP/IAX users)
)etaul	t Settings for a New User	
	▼ SIP	☐ IAX2
	Agent	▼ NAT

Item	Explanation
Local Extensions	Set up the digit of local extensions
Operator Extension	Set up Operator Extension.
Global Ring Time Set(s)	Set Ring Time for each extension.
Enable Transfer	Enable transfer feature key.
Enable Music On Ringback	Enable music on ringback.
Allow multiple extensions to be assigned to one analog phone	Allow multiple extensions to be assigned to one analog phone.
Allow extensions to be Alpha	If extension is Alpha, outside line can't call in, but
Numeric (SIP/IAX users)	extension can call out.
NAT	Check this option if the User or Phone is located behind a NAT (Network Address Translation) enabled gateway.
SIP	Check this option if the User or Phone is using SIP or is a SIP device.
IAX2	Check this option if the User or Phone is using IAX2 or is an IAX2 device.
Agent	Check this option if the User or Phone should have Call-Waiting capability.
VM Password	Voicemail Password for this user, eg: "1234".
Delete VMail	Voicemail will not be checkable by phone if you

chose this option. Messages will be sent by e-mail
only. Note:you must configure SMTP server for this
functionality.

4.2 VoiceMail

Details configuration on VoiceMail: VoiceMail Reference/ Voice Message Options/ Playback Options. If you need send message by mail to your defined mailbox, you must configure SMTP and Email model. Click 【Voicemail】 to display the diagram as below:

Voice	Mail Reference	
	Extension for checking messages:	600
	Max greeting(seconds):	60
	Direct to Voicemail:	
	Dial '0' for Operator:	
Voice	Message Options	
	Message Format:	WAV (16-bit) ▼
	Maximum messages:	100 ▼
	Max message time(minutes):	5
	Min message time(seconds):	No minimum ▼
Playba	ack Options	
	Say message Say message	
	Play envelope	2
	Allow users to	o review

Item	Explanation	
Extension for checking	The number that users call in order to access their	
messages	voicemail accounts, the default number is "600".	
Max greeting(seconds)	Defining this option to set a maximum time for the	
wax greeting(seconds)	greeting message.	
Direct to Voicemail	Defining this option to go to voicemail box directly.	
Dial "0" for Operator	Callers entering the voicemail application can leave for	
Diai o foi Operatoi	Operator by dialing "0".	
Message Format	Choose the format of the voicemail messages in this	
Wessage Format	selection box.	
Maximum Messages	Choose the maximum number of messages in this	
waxiiiiuiii wessages	selection box.	

Maximum message time	Choose the maximum duration of a voicemail message.
(min)	Message recording will be stopped when it's timeout.
Minimum message time	Choose the minimum duration of a voicemail message in
· ·	this selection box. Message time below this threshold will
(s)	be deleted automatically.
Say message Caller-ID	Choose this option to play Caller's ID before voicemail
	message is played.
Cay manage dynatics	Choose this option to play the duration of message
Say message duration	before the voicemail message is played.
Play envelope	Choose this option to play envelop (including date, time
	and caller ID).
Allew we are to review	Choosing this option, the caller leaving the voicemail can
Allow users to review	review their recorded message before it's submitted.

SMTP Settings:

SMTP Settings:	
SMTP server: Port: SSL/TSL: Enable SMT	25
S	ave Cancel

Item		Explanation
		In order to send e-mail notifications of your voicemail. Set
SMTP server	OMTD comes	the IP address or domain name of a SMTP server that
SMTP server		your IP PBX may connect to.
		eg: mail.yourcompany.com
		The port number which the SMTP server running is
Port		generally port 25. If SSL is encrypted, please use port
		465 instead.
SSL/TSL		Enable use SSL/TLS to send secure messages to server.
Enable	SMTP	If your SMTP server needs Authentication, please enable
Authentication	SWITE	SMTP Authentication, and configure the following
Authentication		information.
Username		Input username of your email box.
Password		Input password of your email box.

Email Settings

	Template for Voicemail Emails
	✓ Attach recordings to e-mail
Sender Name	IPPBX Server
From	username@mailserver.com
Subject	you've a voicemail from \${VM_CALLERID}
Message	Dear \${VM_NAME}, you have a new voicemail from \${VM_CALLERID}, the message time is \${VM_DUR}.
Template Varia	Save Cancel Ables: \${VM_NAME} : Recipient's firstname and lastname \${VM_DUR} : The duration of the voicemail message \${VM_MAILBOX} : The recipient's extension \${VM_CALLERID} : The caller id of the person who left the message \${VM_MSGNUM} : The message number in your mailbox \${VM_DATE} : The date and time the message was left

Item	Explanation		
Attach recordings to e-mail	This option defines whether or not voicemails are sent		
Attach recordings to e-mail	to the Users' e-mail addresses as attachments.		
Sender Name	Display the Sender name when you receive a		
Sender Maine	voicemail.		
From	Sender's email address		
Subject	Subject of the mail		
Message	The message pattern		

4.3 Music Settings

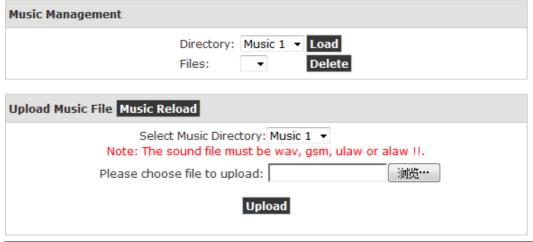
Management for music on hold, music on ringback, music on call queue. Click [Music Settings] to display the diagram as below:

Music Settings:

	Music Settings	Music Management
Music On Hold Referen	ıce	
Music: Music 1 ▼		
Music On Ringback Re	ference	
	Music	:: Music 2 ▼
Music On Call Queue F	Reference	
_	Music	:: Music 3 ▼
	Save Can	cel Music Reload

Please define different music file for different music folders.

Music Management:

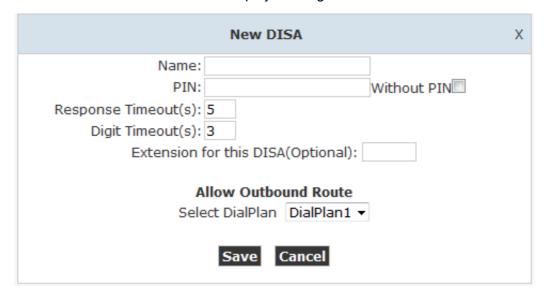


Item	Explanation
Directory	Load music in the music file.
Files	Display music in the music file, or you can delete it.
Enter The Music File Name	Input music file name which you want to upload.(GSM
	format)
TFTP Server IP address	Please enter your TFTP server IP address.
Coloot Music Directory	Select directory where the uploaded music file will be
Select Music Directory	saved.

4.4 DISA

A trunk call into the PBX, and call to another trunk through outbound route of the PBX. Eg: This trunk can make international call, you are out of the office and want to contact with your customer in foreign country, now you can dial DISA number, after PIN authentication, you are connected to your customer, and you can speak to your customer now.

Click [DISA] --- [New DISA] to display the diagram as below:

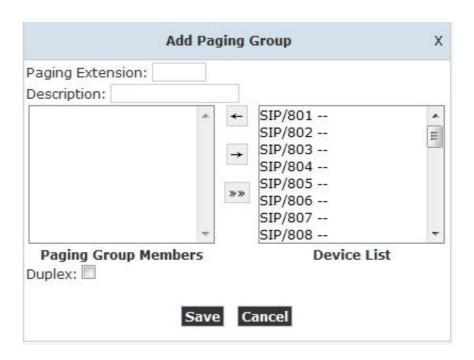


Item	Explanation	
Name	Give this DISA a brief name to help you identify it.	
PIN	The user will be prompted for this number	
Response Timeout(s)	The maximum amount of time it will wait before	
	hanging up if the user has dialed an incomplete or	
	invalid number. Default is10 seconds.	
Digit Timeout(s)	The maximum amount of time permitted between	
	digits when the user is typing in an extension. Default	
	is 5 seconds.	
Extension for this DISA (Optional)	If you want this DISA to be accessible by dialing an	
	extension, you can define an extension number for	
	this DISA.	
Select DialPlan	Set the DialPlan that calls will originate from.	

4.5 Paging And Intercom

Paging And Intercom is used for calling a paging extension, all terminals which support this function will be picked up automatically and listen, meanwhile, it supports duplex.

Click 【Paging And Intercom】 --- 【Add Paging Group】 to display the diagram as below:

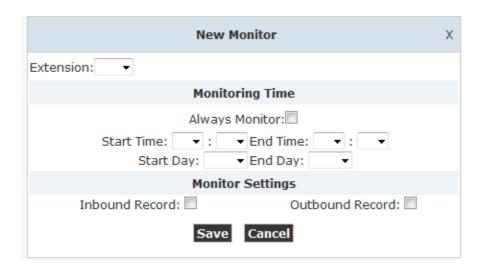


Item	Explanation	
Paging	The number users will dial to page this group.	
Extension		
Description	Provide a descriptive title for this Page Group.	
Paging Group	Salastad davisa(s) in this page	
Members	Selected device(s) in this page	
Device List	Select Device(s) to Page.	
	Paging is typically one way for announcements only. Checking	
Duplex	this will make the paging duplex, allowing all phones in the	
	paging group to be able to talk and be heard by all. This makes it	
	like an "instant conference".	

4.6 Monitor

Monitor is used for recording the defined extensions.

Click [Monitor] --- [New Monitor] to display the diagram as below:

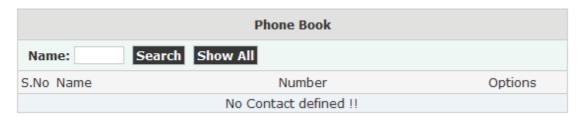


Item	Explanation	
Extension	Define an extension.	
Monitoring Time	Set monitoring time	
Inbound Record	Check to record inbound calls	
Outbound Record	Check to record outbound calls	

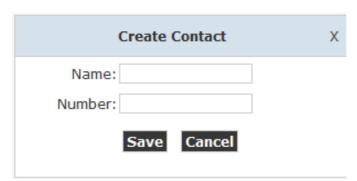
4.7 Phone Book

If incoming call was matched with the number in the phone book, the incoming call will display the name of matched number.

Click [Phone Book] to display the diagram as below:



- Search Input contact name to search
- Show All Show all contacts



- Name Add contact's name, Alphabetic or numeric only.
- Number Add contact's number, international phone number is supported.

4.8 Feature Codes

Click **[** Feature Codes **]** to display the diagram as below, you can define relevant parameter.

Feature Codes Management				
Call Parking				
Extension to Dial for Parking Calls:	700			
What extensions to park calls on:	701-720			
How many seconds a call can be parked for:	45			
Pickup Call				
Pickup Extension:	*8			
Pickup Specified Extension:	*7			
Transfer				
Blind Transfer:				
Attended Transfer:	*2			
Disconnect Call:	*			
Timeout for answer on attended transfer:	15			
Black List				
Blacklist a number:				
Remove a number from the blacklist:	*31			
Conference				
Invite Participant:				
Create Conference:				
Return to conference with participant:	**			
Return to conference without participant:	*#			
Call Queue	*62			
Agent Login Extension:				
Agent Callback Login Extension:				
Agent Logoff Extension:				
Pause Queue Member Extension:				
Unpause Queue Member Extension:	~6/			
Save Cancel				

Item	Explanation	
Extension to Dial for	Set Call Parking number.	
Parking Calls	Set Gail Farking number.	
What extensions to park	M/hat autonaiana ta nark calla an agu (701 720)	
calls on	What extensions to park calls on, eg: (701-720)	
How many seconds a	Set the call time by second, if it's time out, system will call the	
call can be parked for	previous extension again.	
Pickup Extension	Set Pickup Extension.	
Pickup Specified	Set Pickup Specified Extension, default: dial *7+extension to	
Extension	pickup the extension.	
Blind Transfer	Allow unattended or blind transfers. It works like this: While	

	on a conversation with A, you dial the blind transfer key sequence. The system says "Transfer" then gives you a dial tone, while A is on hold. You dial the transferee number(B's number) and A is put through to B immediately. Your line is off. The caller ID displayed to B is exactly the same as the caller ID presented to you.	
Attended Transfer	Allow attended transfer or supervised transfer. It works like this: While on conversation with A, you dial the Attended Transfer key sequence. The system says "Transfer" then gives you a dial tone, while A is on hold. You dial the transferee number(B's number) and talk with B to introduce the call, then you can hang up and A will be connected with the B. In case B does not want to answer the call, he/she simply hangs up and you will be back to your original conversation.	
Disconnect Call	Disconnect the current transfer call(for Attended transfer).	
Timeout for answer on attended transfer	Set the answer timeout value.	
Blacklist a number	Add a black list number.	
Remove a number from the black list	Remove a black list number.	
Invite Participant	The administrator can invite another person by pressing 0 when he/she is in the conference. When you press 0, you will get a dialtone to enter the number of part A you also would like to invite. After the call has been established and you talk to B, you can press ** to direct him to the conference, or *# to hang up the current call and return to the conference yourself.	
Create Conference	While you speak with another party you can press *0, you and the callee are immediately transferred to conference.	
Return to conference with participant	The administrator can invite another person by pressing 0 when he/she is in the conference. When you press 0, you will get a dialtone to enter the number of part A you also would like to invite. After the call has been established and you talk to B, you can press ** to direct him to the conference, or *# to hang up the current call and return to the conference yourself	
Return to conference without participant	The administrator can invite another person by pressing 0 when he/she is in the conference. When you press 0, you will get a dialtone to enter the number of part A you also would like to invite. After the call has been established and you talk to B, you can press ** to direct him to the conference, or *# to hang up the current call and return to the conference yourself.	
Agent Login Extension	Logs the current caller into the queue as a call agent. Once logged in, the agent can take calls with the phone off-hook;	

	each call is preceded by a warning tone. Calls are ended by	
	pressing the "*" key.	
	Extension to be dialed for the Agents to Login to the Specific	
Agent Callback Login	Queue.	
Extension	Same as Agent Login Extension, except you do not have to	
	remain on the line.	
Agent Logoff Extension	Agent logoff from the queue.	
Pause Queue Member	'Pauses' a queue member. so that the member can not	
Extension	receive calls.	
Unpause Queue	'Unpause' a queue member who is 'paused' previously. so	
Member Extension	that the member can receive calls again.	

Chapter 5 Status

This chapter will introduce you the status of record list, call logs, system info, register status etc.

5.1 Record List

Check the record list of defined extension or conference, you can delete the record list. Click [Record List] --- [Monitor] and [Conference] will be displayed as below:

Monitor List Interface



Conference List interface



5.2 Call Logs

Check call logs of extension by caller ID or callee ID. Click 【Call Logs】 to display the diagram as below:

Call Logs Interface



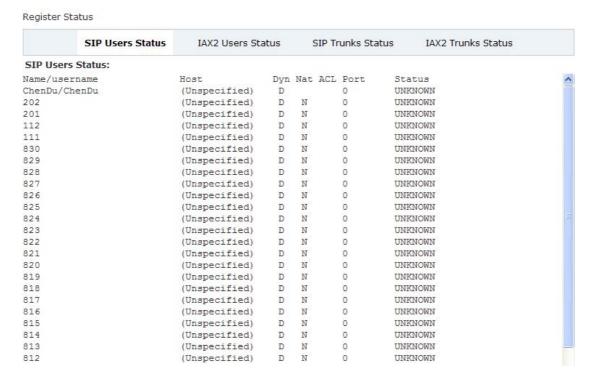


Duration in the call logs is not real charged duration, if you need billing, PSTN must

support polarity reversal function, meanwhile, you must configure relevance parameters of polarity reversal in trunk configuration for the IP PBX.

5.3 Register Status

Check SIP/ IAX2 User, and SIP/IAX2 Trunk status. Click 【Register Status】 to display the diagram as below:



5.4 System Info

Check OS version, firmware version and memory, etc from here. Click 【System Info】 to display the diagram as below:



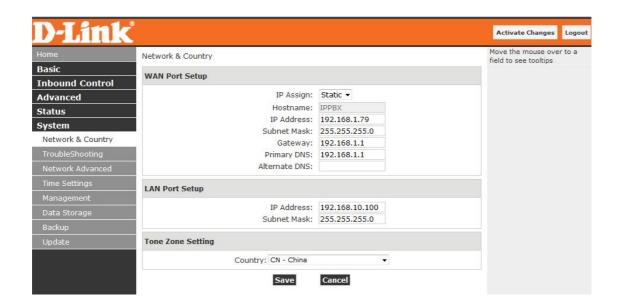
Chapter 6 System

This chapter will introduce you how to configure the system of D-LINK IP PBX.

6.1 Network And Country

Configure WAN/ LAN IP, and tone zone.

Click [Network And Country] to display the diagram as below:

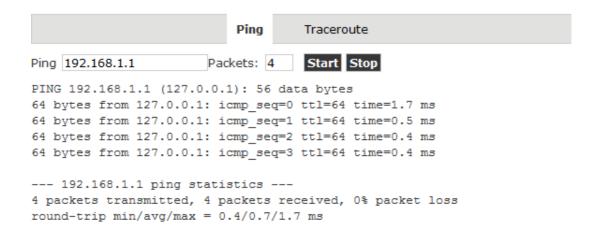


IP Assign
 Hostname
 IP address
 Set static IP address of WAN port on this device.
 Subnet mask
 Gateway
 DNS
 Tone Zone Setting
 Support Static, DHCP and PPPoE.
 Support Static, DHCP and PPPoE.
 Support Static, DHCP and PPPoE.
 Specify anameserver to resolve on this device.
 Specify the subnet mask of the above static IP address.
 Specify a gateway to reach non-local addresses.
 Define the tone zone for home country or place.

6.2 TroubleShooting

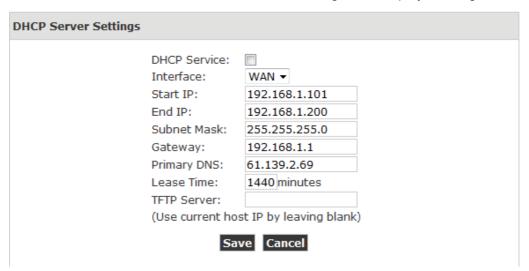
You can ping other network device through D-LINK IP PBX and track network route by command "Traceroute" .

Click [TroubleShooting] to display the diagram as below:



6.3 DHCP Server Settings

Click [Network Advanced] --- [DHCP Server Settings] to display the diagram as below:



• DHCP Server Enable/Disable DHCP Server.

Interface Selcet DHCP service work on the which port.
 Start IP Set start IP of the DHCP IP address pool.

End IP Set end IP of the DHCP IP address pool.

Lease Time
 Set lease time of the IP address.
 TFTP Server
 Set TFTP server for auto provision.

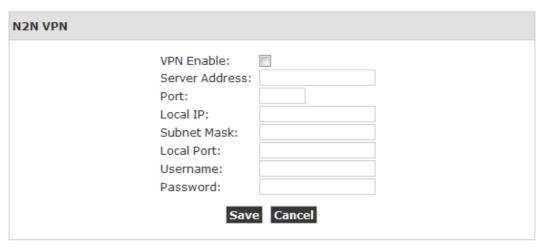
6.4 DDNS & VPN

After configure DDNS, you can visit by domain remotely. Click 【DDNS】 to display the diagram as below:

DDNS Settings:



Click 【VPN】 to display the diagram as below:





- 1) DDNS supports the domain provided by Dyndns.org / no-ip.com /zoneedit.com.
- 2) VPN supports N2N only.

6.4 Time Settings

Click Time Settings I to display the diagram as below:

Time Settings			
		OManual Time Set	
	pool.ntp.org		
Time Zone:	(GMT+08:00)Be	ijing,Hong Kong,Urumqi ▼	

Time Settings	
01	NTP Manual Time Set
Year:	(YYYY, eg: 2010)
Month:	(MM, eg: 05)
Day:	(DD, eg: 08)
Hour:	(HH, eg: 09)
Minute:	(MM, eg: 30)
	Synchronize current PC time Sync

Item	Explanation	
	Specify the NTP server that you wish to use. You may type either	
NTP Server	the domain name or the IP address of the server, and it may be	
	either remote or local. The default server is pool.ntp.org. Be	
	aware that the PBX needs to be able to connect to a NTP server	
	for perfect function.	
Time Zone	Select your time zone so that the system will set time based on	
Time Zone	the time zone.	
Synchronize with	Click the button to synchronize the PBX time with the current PC	
current PC time	time.	

6.5 Management

Management on username, password, access permit, etc. Click [Management] to display the diagram as below:

	Management	Access Permit	
Change Password			
Username: Password: New Username: New Password: Retype New Password:			
	Aj	oply	
Set Language			
Set Voice Language:			
(Show Advanced Options)			

- (Show Advanced Options)
- Change Password You can change the password of admin here (default password is admin)
- Set Language
 Set voice language of the system. And you can set the SIP &
 Analog channel here by clicking "Show Advanced Options"

Click [Management] --- [Access Permit] to display the diagram as below:





After you added a permitted IP, you can only login the system by this IP, other IP address isn't effective to login the system.

6.6 Data Storage

Upload the voicemail, monitor, conference, call logs, etc to the defined FTP server for storage.

Click 【Data Storage】 to display the diagram as below:

	Data Storage	Data Storage Log
FTP Data Storage		
	Enable Uploadi Server Addre User Nai Passwo Directo	me: prd:
Status: Disabled		

Upload Voicemail, Conference record, Monitor and Call logs to the defined FTP Server automatically when flash storage is over 40%. Then the history files will be removed out automatically.

(Note: NOT upload in working time).

Item	Explanation
Enable Uploading	Enable periodical FTP uploading.
Server Address	Set FTP Server address(IP address or Domain).
User Name	FTP account name.
Password	FTP account password.
Directory	Define a directory on the FTP server.

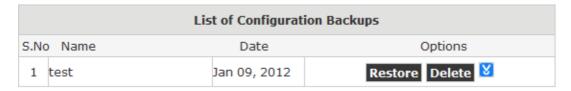


Note:

- 1) Upload Voicemail, Conference record, Monitor and Call logs to the defined FTP Server automatically when flash storage is over 40%. Then the history files will be removed out automatically.
- 2) NOT upload in working time by default.

6.7 Backup

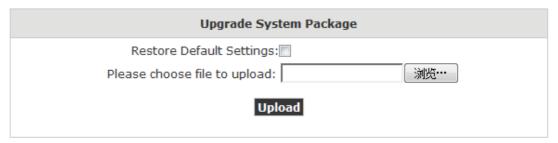
Backup all the settings. Click [Backup] to display the diagram as below:



- Restore Restore your selected backup file to system.
- Delete Delete your selected backup file.
- Download your selected backup file to your PC. (Note: Please don't change the backup file name)

6.8 Update

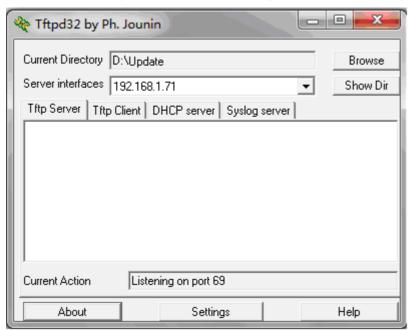
- Here, you can upload firmware, IVR prompt, backup files to update the system.
- Click [Update] to display the following diagram:



Extract the downloaded firmware package which includes one TFTP server and one upgrading file.



Run TFTP server, you will see the following interface:



Go into the "update" page, and upload firmware;

Enter the package name uImage-md5

Enter TFTP Server IP address,

192.168.1.71

Click **Update** button to finish upgrading system package after entering the TFTP Server IP. Then system will reboot automatically.