



Com.X IP PBX

Yealink SIP Phone Guide

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Document History

Version	Date	Description of Changes
1.0	2010/01/22	Preliminary
1.1	2012/05/07	Added recommendation on semi-attended transfer setting for yealink phones.

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1 Introduction

1.1 Overview

This document describes the use of Yealink SIP phones with the Com.X PBX. The following models are considered:

- T20
- T22P
- T28P

1.2 Terminology

BLF – Busy Lamp Field, a set of lamps and buttons allowing monitoring and access to extensions, normally provided on the switchboard phone

DSS – Direct Station Select, the buttons in the BLF that provide dial, transfer and pickup for specific extensions



2 System Administration

2.1 Networking

2.1.1 Isolated LAN / VLAN

It is recommended that the SIP phones be accommodated either on a physically separate LAN, or on a VLAN overlay of the main LAN.

In either of these cases, the Com.X / SIP network has a private address range (subnet) and the Com.X should be the DHCP server for the subnet.

A dedicated LAN port on the Com.X may be connected to the LAN or VLAN.

2.1.2 Main Enterprise LAN

In this configuration the SIP phones are managed on the main Enterprise LAN, along with the Comma PBX.

The enterprise DHCP server typically provides the IP addressed for the phones.

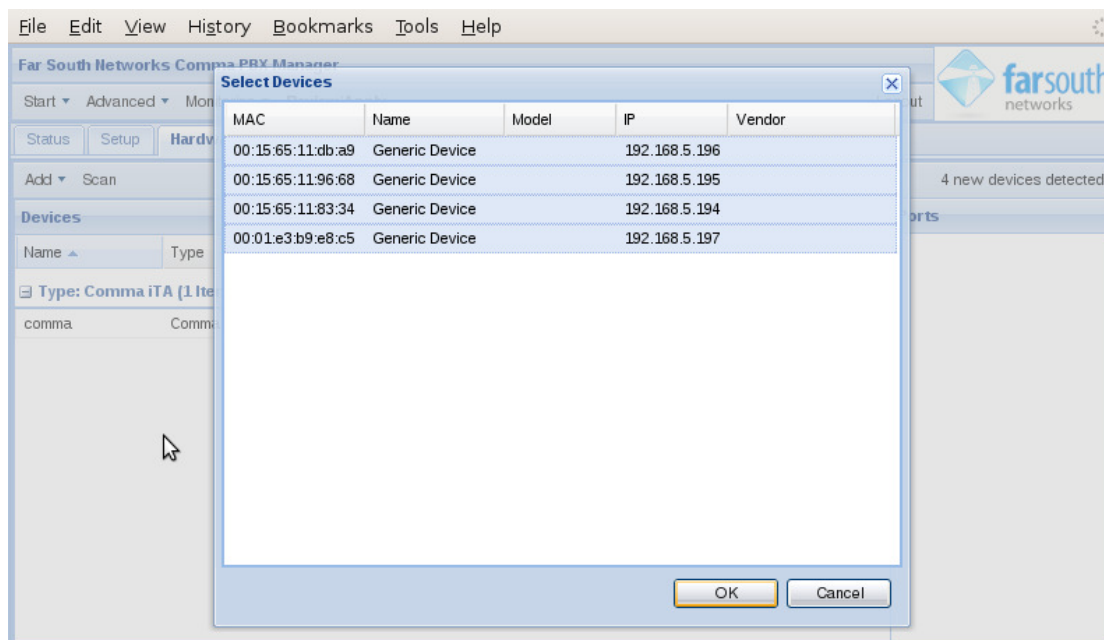
2.2 Configuring Com.X

2.2.1 Detecting Phones

The phones are detected in the Hardware panel. If Com.X is the DHCP server for the phones, they will be detected automatically. If the DHCP server is external to Com.X, the Scan button may be used to detect the phones.

Add the detected phones (Click Add... Detected... then select required devices), name them suitably and Apply the updated configuration.

Note: each phone is identified uniquely by its MAC address, which may be found on a sticker on the underside of the unit.

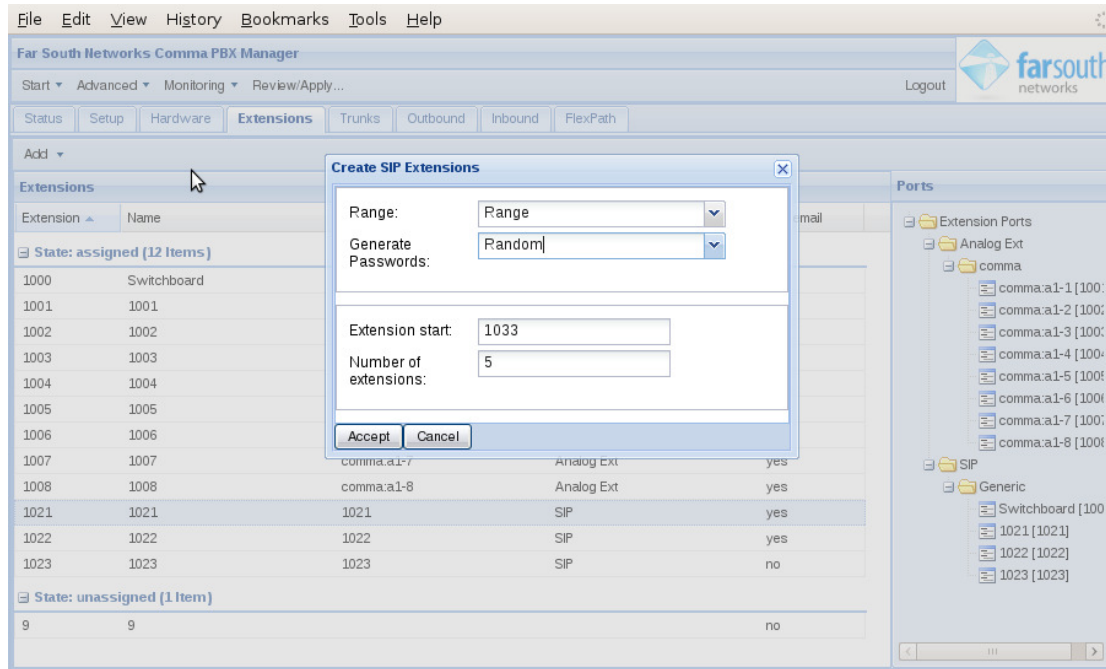


For more details, see the Com.X System Administrator's Guide.



2.2.2 Adding SIP Extensions

For each Yealink phone to be added to the system, a Generic SIP extension should be created. A range of extensions may be generated in bulk, as shown in the screen shot below.



For each generated extension, it is necessary to note the following information for configuring the associated phone:

- Port number (same as extension number) (e.g. 1033)
- Password (e.g. b3vwx3v6)

1021	1021	1021	1021	SIP	yes
1022	1022	1022	1022	SIP	yes
1023	1023	1023	1023	SIP	no
1033	1033	1033	b3vwx3v6	SIP	no
1034	1034	1034	jtjongv1	SIP	no
1035	1035	1035	f8bha39h	SIP	no
1036	1036	1036	yuat0j9x	SIP	no
1037	1037	1037	7icknxne	SIP	no

For more details, see the Com.X System Administrator's Guide.

2.3 Configuring Yealink Phones

The Yealink phones may be configured via the Com.X GUI from the Hardware Panel.

2.3.1 Connect to Device Web Interface

Select Hardware panel in Com.X GUI. Right click required phone and select Connect.



Name	Type	Model	MAC Address	IP Address	Auto IP	Status
Type: Comma iTA (1 Item)						
comma	Comma iTA	1P4B808S	00:50:c2:97:90:47	169.254.213.2	false	OK
Type: Generic Device (4 Items)						
A580-IP	Generic Device		00:01:e3:b9:e8:c5	192.168.5.197	true	OK
Switchboard	Generic Device		00:15:65:11:db:a9	192.168.5.196	true	OK
t20p	Generic Device		00:15:65:11:83:34	192.168.5.194	true	OK
t22p	Generic Device		00:15:65:11:96:68	192.168.5.195	true	OK

2.3.2 Account Settings

In the phone configuration window, click the Account tab.

alink
EASY VOP

Status Account Network Phone Contacts

Account 1 | Account 2 | Account 3 | Account 4 | Account 5

Basic >>

Register Status	Registered
Line Active	<input checked="" type="radio"/> On <input type="radio"/> Off
Label	switchboard
Display Name	switchboard
Register Name	1000
User Name	1000
Password	••••
SIP Server	192.168.5.1 Port 5060
Enable Outbound Proxy Server	Disabled
Outbound Proxy Server	Port 5060
Backup Outbound Proxy Server	Port 5060
NAT Traversal	Disabled
STUN Server	Port 10000
Voice Mail	*97
Proxy Require	

Codecs >>

Enter the following fields in the basic section:

- Label: name of account shown on phone
- Display Name: caller ID name when calling internally
- Register Name: the port number/extension number from Com.X GUI Extensions panel



- User Name: as above
- Password: the password from Com.X GUI Extensions panel.
- SIP Server: the Com.X network address.
- Voice Mail: *97

Enter the following fields in the Advanced section:

- Subscribe for MWI: Enabled

Codecs >>	
Advanced >>	
UDP Keep-alive Message	Enabled <input type="button" value="v"/>
UDP Keep-alive Interval	30 (seconds)
Login Expire	3600 (seconds)
Local SIP Port	5060
RPort	Disabled <input type="button" value="v"/>
SIP Session Timer T1	0.5 (seconds)
SIP Session Timer T2	4 (seconds)
SIP Session Timer T4	5 (seconds)
Subscribe Period	1800 (seconds)
DTMF Type	RFC2833 <input type="button" value="v"/>
How to INFO DTMF	Disabled <input type="button" value="v"/>
DTMF Payload	101 (Scope:96~255)
100 reliable retransmission	Disabled <input type="button" value="v"/>
Enable Precondition	Disabled <input type="button" value="v"/>
Subscribe Register	Disabled <input type="button" value="v"/>
Subscribe for MWI	Enabled <input type="button" value="v"/>
Caller ID Header	FROM <input type="button" value="v"/>
Use Session Timer	Disabled <input type="button" value="v"/>
Session Timer	(seconds)
Refresher	Uac <input type="button" value="v"/>
Use user=phone	Disabled <input type="button" value="v"/>
Voice Encryption(SRTP)	<input type="radio"/> On <input checked="" type="radio"/> Off
ptime	Disabled <input type="button" value="v"/> (ms)
BLFList URI	
Anonymous Call	Disabled <input type="button" value="v"/>
Anonymous Call Rejection	Disabled <input type="button" value="v"/>

2.3.3 Additional phone configuration

From the 'Phone', 'Features' menu, disable 'Semi-Attended Transfer'.

2.4 Network Time Protocol

The Com.X can provide time synchronization to the phones.

In the Phone... Preference tab, enter the following:

- Time Zone: +2
- Primary NTP server: Com.X server address



- Secondary NTP server: blank

The screenshot shows the 'Phone' configuration page in the Yealink web interface. The 'Phone' tab is selected, and the 'NTP' sub-tab is active. The configuration fields are as follows:

Language	English
Time Zone	+2 Central Europe: Turkey, Greece, Finland
Primary NTP Server	192.168.5.1
Secondary NTP Server	
Update Interval	1000 (seconds)
Daylight Saving Time	Disabled
StartTime	Month 1 Day 1 Hour 0
EndTime	Month 12 Day 31 Hour 23
Manual Time	Disabled

2.5 Busy Lamp Field / Direct Station Select

Certain Yealink models (e.g. T28P) have Busy Lamp Field and Direct Station Select. These lamps and keys should be mapped to the configured extensions to allow quick dial, transfer, call pickup, and status readout for all or selected extensions in the system.

Additional outboard modules can be added to increase the number of BLF/DSS.

Select Phone... DSS for built-in BLF/DSS, or select Phone... EXT Key for outboard BLF/DSS module if fitted.

For each key, set the following fields:

Type: BLF

Extension: <extension number> e.g. 1001

Pickup Number: **<extension number> e.g. **1001



Key	Type	Mode	Line	Extension	Pickup Number
Line Key1	BLF	Conference	Line1	1001	**1001
Line Key2	BLF	Conference	Line1	1002	**1002
Line Key3	N/A	Conference	Auto		
Line Key4	N/A	Conference	Auto		
Line Key5	N/A	Conference	Auto		

2.6 Dial Plan

Optionally, the dial plan may be set for a phone to enable auto-completion of dialling (“Dial Now” feature). If enabled, this feature allows the phone to determine when all digits of a particular number pattern have been completed (e.g. 10 digit domestic dialling) and try the call immediately instead of waiting for the interdigit timeout to complete, or #/SEND to be pressed.

Select Phone... Dial Plan... Dial Now.

Add rules as required, e.g.

0[1-9]xxxxxxx

10xx

10111

Numbers matching these patterns will now initiate immediate dialling.

2.7 Other

Other feature settings:

For SA compatible tones: Phone -> Tones -> Select country: New Zealand

For busy tone on reject or hangup: Phone -> Features -> BusyToneDelay: 5



3 End User Guide

All the Com.X PBX features are available on the Yealink phones. For detailed usage of the devices, see Yealink user guides:

<http://www.yealink.com/en/download.asp?BigClassName=IP%20Phone>