## **Battery Optimization Guide**

## Introduction

The AX83H battery supports 200 hours of standby time and 9 hours of talk time. However, certain factors may affect the maximum achievable duration. Users must understand these factors and configure the AX83H accordingly. This guide provides detailed instructions on correctly configuring and using the AX83H to achieve optimal battery endurance, ensuring the best user experience.

## **Common Issues and Resolutions**

If the battery life of the AX83H suddenly deteriorates, the first thing to check is whether the device remains constantly in an awake state. Many factors can cause the system to wake up or stay awake for prolonged periods. The following are common scenarios that may result in the device staying awake:

## 1. The SIP server registration expiration time is too short.

#### Introduction

Generally, the SIP server registration expiration time is a larger value (3600 seconds), but in some special scenarios, a smaller value (60 seconds or less) may be used, which will cause the system to frequently wake up and refresh registration requests. Please ensure that the **Server Expires** is a reasonable value. **Auto Provisioning** 

Parameter	Permitted Values	Default	Description
account.X.sip_server .Y.expires	Integer from 30 to 2147483647	3600	It configures the registration expiration time (in seconds) of SIP server Y.

Set via the Web User Interface

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	~	These users (user) are using the second	e default password, please change the pa	assword!			
nt	^	Account	Account 1	•	0		NOTE
r		Register status	Disabled		0		Account Registration Register account (s) for the IP phone.
		Line Active	OFF		?		Server Redundancy
		Label			0		It is often required in VoIP development to ensure servi continuity, for events where the server needs to be take offline for maintenance, or for events when the
ed		Display Name			?		connection between the IP phone and the server fails.
ĸ	~	Register Name			0		NAT Traversal A computer networking technique of establishing and maintaining Internet protocol connections across
	~	Username			?		gateways that implement NAT.
	~	Password		۵	0		You can configure NAT traversal for this account.
	~	SIP Server 1					Olick here to get more product documents.
	~	Server Host			Port 5060	0	
	~	Transport	UDP	•	0		
		Server Expires	3600		0		
		Server Retry Counts	3		?		
		SIP Server 2					

## 2. NAT keep-alive setting is too short.

### 2.1 Device SIP or NAT keep-alive settings:

#### Introduction

If you use a shorter interval for SIP or NAT keep-alive, it will severely affect battery life. First, check if the device requires NAT keep-alive to function properly. If you need to use NAT keep-alive, use an interval that is slightly lower than the NAT mapping refresh time.

### **Auto Provisioning**

Parameter	Permitted Values	Default	Description
account.X.nat.u dp_update_ena ble[1]	<ul> <li>0-Disabled</li> <li>1-Default (the phone sends the corresponding packets according to the transport protocol)</li> <li>2-Options (the phone sends SIP OPTIONS packets to the server)</li> <li>3-Notify (the phone sends SIP NOTIFY packets to the server)</li> </ul>	1	It sets the type of keep-alive packets sent by phone.
account.X.nat.u dp_update_tim e[1]	Integer from 0 to 3600	30	It configures the interval (in seconds) at which the phone sends a keep-alive package. (i) NOTE It works only if account.X.nat.udp_update_ enable is set to 1, 2 or 3.

[1]If you change this parameter, the phone will reboot to make the change take effect.

## Set via the Web User Interface

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i) Status	~	These users (user) are using the default p	password, please change the password!		×
L Account	^	Account		. 0	NOTE
Register		Keep Alive Type	Disabled	. 0	DTMF It is the signal sent from the IP phone to the network,
Basic		Keep Alive Interval (Seconds)	30	0	which is generated when pressing the IP phone's keypad during a call.
Codec		RPort	Disabled	. 0	Session Timer
Advanced Network	~	DTMF Type	RFC2833 -		It allows multiple participants (more than three) to join a call.
Dsskey	Č.	DTMF Info Type	DTMF-Relay	• ?	VQ-RTCPXR The VQ-RTCPXR mechanism, complaint with RFC 6035,
Features	~	DTMF Payload Type (96~127)	101	?	sends the service quality metric reports contained SIP PUBLISH messages to the central report collector.
Settings	~	Retransmission	OFF	?	Olick here to get more product documents.
Directory	~	Subscribe Register	OFF	?	
Security	~	Subscribe for MWI	OFF	?	
		MWI Subscription Period (Seconds)	3600	?	
		Subscribe MWI to Voice Mail	OFF	0	
		Voice Mail Voice Mail Display		0 0	
		voice man bropidy	Confirm Cancel	U	

### 2.2 Server keep-alive setting:

#### Introduction

Some servers have enabled the NAT device keep-alive feature, which sends SIP Options keep-alive messages every 20-30 seconds. This message periodically wakes up the system and has a significant impact on battery life. If possible, please adjust the keep-alive message interval of the server according to the NAT mapping refresh time. Confirm the necessity of this feature, and if not needed, please disable it.

## 3. TR-069 feature

#### Introduction

TR-069 is a technical specification, which is defined by the Broadband Forum. It defines a mechanism that encompasses secure auto-configuration of a CPE (Customer-Premises Equipment) and also incorporates other CPE management functions into a common framework. TR-069 uses common transport mechanisms (HTTP and HTTPS) for communication between CPE and ACS (Auto Configuration Servers).

When the device has the TR-069 feature enabled, it regularly establishes connections and reports relevant status to the server. Please disable the TR-069 feature or adjust the **Periodic Inform Interval (seconds)** of TR-069 to a longer time.

#### **Auto Provisioning**

Parameter	Permitted Values	Default	Description
static.managementserver. periodic_inform_enable	<b>0</b> -Disabled <b>1</b> -Enabled	1	It enables or disables the phone to periodically report its configuration information to the ACS server

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			It configures the interval (in seconds) at which the phone reports its configuration to the ACS server.
static.managementserver. periodic_inform_interval	Integer from 5 to 4294967295	60	(i) NOTE It works only if static.managementserver.periodic_inform_en able is set to 1 (Enabled).

#### Set via the Web User Interface

nk   ахвзн				About Lanı
^	These users (user) are using the default	t password, please change the password!		
œ	TR069			NOTE
te	Enable TR069	OFF	?	TR-069 Device Management TR-069 is a technical specification defined by t
	ACS Username		?	Broadband Forum, which defines a mechanism encompasses secure auto-configuration of a C
	ACS Password		) ()	(Customer-Premises Equipment), and incorpor CPE management functions into a common fra
	ACS URL		?	Olick here to get more product documents.
	Enable Periodic Inform		?	
	Periodic Inform Interval (seconds)	3600	0	
	Connection Request Username		0	
	Connection Request Password		• •	
9				
~				
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## 4. The frequency of interacting with servers.

#### Introduction

Frequent synchronization and updates of the remote phonebook/Broadsoft Directory with the server can increase network activity and data transfer, resulting in higher battery consumption. Therefore, we recommend **extending the refresh frequency** of the directory as much as possible to reduce the frequency of interaction with the server. **Auto Provisioning** 

Parameter	Permitted Values	Default	Description
features.remote_p honebook.flash_ti me	0, Integer from 3600 to 1296000	21600	It configures how often to refresh the local cache of the remote phone book. If it is set to 3600, the phone will refresh the local cache of the remote phone book every 3600 seconds (1 hour). If it is set to 0, the phone will not refresh the local cache of the remote phone book.



			Configures the interval (in minutes) for the IP phone to update the data of the BroadSoft Directory from the BroadSoft server.		
directory.update_ time_interval	Integer from 60 to 34560	60	(i) <b>NOTE</b> It works only if bw.xsi.directory.enable and bw.xsi.directory.update.enable are set to 1 (Enabled).		

#### 🕆 TIP

For more detailed information, refer to:

- Broadsoft
- 后续补充Wi-Fi phone这边的链接-Remote Phonebook

#### Set via the Web User Interface

	н				About Language <del>v</del> Logout
Status	~	• These users (user) are using the default	password, please change the password!		×
L Account	~	#	Remote URL	Display Name	NOTE
Network	~	1			Remote Phone Book
Dsskey	~	2			It is a centrally maintained phone book, stored in the remote server.
🕲 Features	~	3			Users only need the access URL of the remote phone book. The IP phone can establish a connection with the
🔅 Settings	~	4			remote server and download the phone book, and then display the remote phone book entries on the phone user interface.
L Directory	^	Incoming/Outgoing Call Lookup	OFF		Olick here to get more product documents.
Local Directory		Update Time Interval (Seconds)	21600		
Remote Phone Book		Opuare nine interval (Seconda)	21000		
Phone Call Info					
Google Contacts					
LDAP					
Multicast IP					
Settings					
Security	~				
			Confirm		

## Additional Suggestions to Extend Battery Life

Here are some additional methods to extend the battery life of the AX83H:

1. Adjust the volume, the lower the volume, the more power it saves.

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2. Turn off the LED indicator and key backlight. Reduce the screen brightness and set the screen timeout to 15 seconds (minimum).

Yealink   AX83H				About Language 🕶 Logout
Status	• These users (user) are using the default	password, please change the password!		×
💄 Account 🛛 🗸	Live Dialpad	OFF		NOTE
🔇 Network 🗸 🗸	Inter Digit Time	4		Watch Dog
🕕 Dsskey 🗸 🗸	Inactive Level	Off 💌 🕐		Live Dialpad It allows IP phones to automatically dial out the entered phone number after a specified period of time.
😍 Features 🛛 🗸	Active Level	6 🗸 🕐		Backlight
Settings ^	Backlight Time	15 s 💌 🕐		Specify the brightness of the LCD screen.
Preference	Sleep Time	15 s 💌 🕐		Specify the contrast of the LCD screen.
Time&Date	Watch Dog			Ring Tones A ring tone alerts you if there is an incoming call.Upload
Call Display	Ring			custom ringtone files, only supports *.wav format, and each file has a maximum limit of 8MB. Wallpaper
Upgrade	Ring Type	Ring1.wav	0	Select a picture as the wallpaper displayed on the IP phone. Upload custom pictures, only supports *.png, *.jpg, *.jpeg, *.bmp formats, and the maximum limit of each
Auto Provision	Upload Ringtone	System Ring Custom F	Ring	picture is 5MB, 2 million pixels.
Configuration			and the integration	Click here to get more product documents.
Dial Plan		Ring7.wav	A Set as ringtone	
Voice		C Ring8.wav	Set as ringtone	
Ring		Ring9.wav	A Set as ringtone	
Tones		Silent.wav	A Set as ringtone	
TR069		Confirm		

- 3. Please turn off the Bluetooth function when not in use.
- 4. When the battery charge reaches 0%, the battery is fully discharged. Storing it in this state for a long time will damage the battery and cause the battery's performance to degrade over time. Please check the battery charge regularly and maintain the battery to avoid full discharge.
- 5. During weekends/holidays, it is recommended to long press the **button** to shut down the phone.

## Troubleshooting

If the device is confirmed to have a short standby time, you can contact Yealink engineers and attach configuration files, log files, and packet capture files. We will help you identify the problem and resolve it as soon as possible.