Setup A Two Way Radio over IP Gateway By Using RT-RoIP1 and Zello

This is a quick guide to setup a two way radio over IP gateway by using RT-RoIP1 and Zello. After the gateway is setup, user can run the Zello software/apps on desktop computer, notebook computer and mobile device to communicate all of the mobiles and handhelds on the site.



1. System Installation

Please refer to the User's Guide of RT-RoIP1 for the details of the system installation. Bear in mind that the system MUST use external antenna for the Radio Unit.

2. Zello Installation

Please browse http://www.zello.com to download and install the Zello software on the gateway computer and mobile phones.

3. Create Accounts

Create accounts and sign in the accounts on the gateway computer and mobile devices.

Zell	0		
Status	⊻iew	Tools	Help
Usernar	ne		
			~
Passwor	d		
Forgot	your pas	sword?	
Create a	new Ze	llo accou	nt
		1920 F 18	
🗌 Sign	in when	Zello sta	urts
Start	when co	omputer s	starts
			Sign in

4. Setup Zello On The Gateway Computer

Click on the **[Tools – Option]** to open the option setup menu.

Setup Control Settings

- Click on the **[Control]** Tab to select the control setup menu.
- Check on the "Enable VOX Handsfree" check box to enable VOX feature.

🔁 Zello options			
í	Control		
Interface		F7	Set
	₩ andsfree	Ctrl + F7	Set
	🗹 <u>R</u> epeat last message	Shift + F7	Set
Control	Enable VOX for Handsfree		
0	VOX settings		
Audio	✓ New conversation alert	Test	Change
	Incoming message alert	Test	Change
	🗹 Clear to send alert	Test	Change
Connection	Connection error alert	Test	Change
T	Incoming message over alert	Test	Change
Ĩ	Outgoing message over alert	Test	Change
VOX	🗹 Call alert	Test	Change
		OK Cancel	Apply

Setup Audio Settings

- Click on the [Audio] Tab
- Select "USB audio CODEC" as Playback device and adjust its output to approximate 90% of MAX level.
- Select "USB audio CODEC" as Recording Device and adjust their output to approximate 90% of MAX level.

🛛 Zello options		
G	Audio	
Interface	Playback device	USB audio CODEC 😽
Control	<u>R</u> ecording device	USB audio CODEC
Audio	Playback amplifier Recording amplifier	0 dB
VOX	Noise suppression	OK Cancel Apply

Setup VOX Settings

Note: Below settings are just recommendation, you may change them to different values.

- Click on the [VOX] Tab
- Adjust the "Activation threshold" to -80dB.
- Adjust the "**De-activation threshold**" to -80dB.
- Adjust the "Trigger time (ms)" to 200.
- Adjust the "**Relaxation Time to**" 200.

🔁 Zello options		X
G	VOX	
Interface	Activation threshold	-80 dB
	De-activation threshold	-80 dB
	Trigger time (ms)	200 🗢
Control	Relaxation time (ms)	200 🗢
Audio		
Connection		
VOX		
		OK Cancel Apply

End of Setup

Click on the **[OK]** button to close the Option setup menu.

5. Add Contacts, Channels or Create Channels

Click on the **[Tools]** pull down menu to select "add contacts", "add channels" or "create channels". For more operation details, please read the information from Zello.

6. Enable Handsfree function

- Click on the contact on the list.
- Click on the [Handsfree] button or [Ctrl-F7] to enable the Handsfree function.



7. Normal Communication

Now the two way radio over IP network was completed setup. All of the mobiles radios, handheld radios, computer, mobile phones can be communicated.