AN021-03 2020-09-09

# How to change Frequency Hopping Table

For RED Utility\_v4.0.0 or later





### **Revision History**

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Version	Date	Description
01	2013-06-27	Initial release
02	2016-05-19	Added configuration of smart hopping
03	2020-09-09	Updated contents



#### **Document Summary**

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- This document contains how to change Frequency Hopping Table and configures smart hopping
- User can change frequency hopping channel numbers, hopping order using these document



## **Set Frequency Hopping Table (1/4)**

• Open Hopping Table

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Click 'FHSS Channel Table' button

Inventory	Inventory Settings	Memory Access	RF Settings	Registry Manager							
User Defined	Pre-defined			<b>-</b>				_			
Region	Korea				Get		R Frequency	Hopping Table		- C	⊐ ×
- Hogichi -					Got		Manual	Remove	Auto	Channel Modif	Table ied
									Coun	🔿 Defau	ult
							Frequency H	Hopping Table			
ELIGO	Channel Table	Channel 9	018 500 MHz		Get		Number	Channel			
11100	Channel Table	onanner 6	510.500 MHZ		Gei		02	17			
							03	11			
RF Power Contro						_	04	02			
RF Power	27.0 dBm					$\rightarrow$	06	05			
							-				
					Get						
DE Control											
Dwell Time	380 ms	🗹 Freq. Hop	ping (Only)	Sense Time	5	ms					
Idle Time	100 ms	Freq. Hop	ping (with LBT)	RF Level	-74.0	dBm					
C	uty Cycle 79%	Listen Be	fore Talk (Only)								
		Listen Be	fore Talk (with FH)		Curr	ent Channel R	S			Update	e Table
					Get		Set				



# Set Frequency Hopping Table (2/4)

Change Hopping Table

Rrequency I	Hopping Table		– 🗆 ×
Add Frequency H	Remove	Auto Scan	Channel Table Modified O Default
Number 01 02 03 04 05 06	Channel 08 17 11 02 14 05		
			Update Table

Auto Channel Table Manual Modified Add Remove Scan Default Frequency Hopping Table Number Channel 02 01 02 08 03 11 Update Table

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1. Select the target channel list

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2. Click "Remove" to remove all or in part of current channel list

- 1. Click "Add" as needed
- 2. Write channel number
- 3. Click "Update Table"

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R Frequency Hopping Table

# **Set Frequency Hopping Table (3/4)**

• Update Registry

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Click 'Update' and 'OK' button

Get Registry       Update         Address Items       Active       Sub Items       Type       Value (DEC)       Value (HEX)         Registry Update       ×         Are you sure you want to change registry?         OK       Cancel	inventory	Inventory Settings Memory Acc	ess RF Settings Registry Manager		
Address Items Active Sub Items Type Value (DEC) Value (HEX)	Get Registry			Update	
	Get Registry Address Items	Active Sub Items Typ	e Value (DEC) Value (HE)		egistry Update × Are you sure you want to change registry? OK Cancel



### **Set Frequency Hopping Table (4/4)**

Confirm Hopping Table

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- Click 'FHSS Channel Table' button and check new channel list

Inventory Inventory Settings	Memory Access	RF Settings	Registry Manager						
User Defined Pre-defined			-		Erequency H	opping Table			
Region Korea ~				Get	Manual Add Frequency Ho	Remove	Auto	Channel Modifie Defaul	Table ed It
FHSS Channel Table RF Power Control RF Power 27.0	Channel 8	✓ 918.500 MHz		Get	Number 01 02 03	Channel 02 08 11			
RF Control Dwell Time 380 ms Idle Time 100 ms	☑ Freq. Hoj □ Freq. Hoj	oping (Only) oping (with LBT)	Sense Time RF Level	Get					
Duty Cycle 79%	☐ Listen Be	fore Talk (Only) fore Talk (with FH)		Current Channel F	85	1		Update	Table
				Get	Set				



### **Smart Hopping Table**

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• Smart Hopping make you find good channel automatically instead of manual setting

₹ Frequency Hopping Table	
Manual Auto Channel Table	1. Search good channel
Add Remove Scan   Modified  Default	
Frequency Hopping Table	$\bullet$
Number     Channel       01     08	2. Wait for the finish response
02 03 Information X	
04 05 Check the Antenna Connection 06	
확인 취소	3. Set frequency hopping mode
	Ļ
	4. Update registry
Update Table	



### **Smart Hopping Table**

Example when using as RCP

#### 1. Search good channel

- Command : Set optimum Frequency Hopping Table
- Packet : BB 00 E4 00 00 7E

#### 2. Wait for Finish Response of the "Set optimum Frequency Hopping Table"

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- Response
- Packet : BB 01 E4 00 01 01 7E (Finish Response)

#### 3. Set Frequency Hopping Mode with Smart Hopping Mode

- Command : Set Frequency Hopping Mode
- Packet : BB 00 E6 00 01 01 7E

#### 4. Registry Update

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- Command : Update Registry
- Packet : BB 00 D2 00 01 01 7E



#### Notice

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- Maximum length of Frequency Table is 50
  - Available channel number is from 1 to 50
- Frequency hopping is executed in order listed

	opping Table		-		×
Add Remove		Auto Scan	Char M D	nnel Tabl odified efault	e
Frequency Ho	pping Table				
Number	Channe	. <b> </b>			
01	08 🗲	<b>-</b>			
02	17				
03	11				
04	02				
05	14				
06	V 05 —	J			



#### **Address information**

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