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Contents

1. FM Introduction.....	5
1.1. Features	5
2. AT Commands.....	6
2.1. AT+FMOPEN Open FM.....	6
2.2. AT+FMCLOSE Close FM	7
2.3. AT+FMFREQ Set FM Frequency	7
2.4. AT+FMVOLUME Set FM Volume.....	7
2.5. AT+FMSCAN Auto Search Channel	8
2.6. AT+FMSIGNAL Query Signal Level	8
2.7. AT+FMVALID Check Frequency Valid.....	9
3. Examples.....	10
Appendix.....	11
A Related Documents.....	11
B Terms and Abbreviations	11

Version History

Date	Version	What is new	Author
2013-10-18	1.00	New version	Yong.lu
2014-06-30	1.01	Chapter 1.1,Modify note	Yong.lu
		Chapter 2.1,Modify AT+FMOPEN	Yong.lu
		Chapter 2.7,Add AT+FMVALID	Yong.lu

Scope

This document presents the AT commands of FM operation and application examples. This document can apply to SIM800 series modules, including SIM800L and SIM800H.

1. FM Introduction

This chapter introduces the FM application features of SIM800 series modules.

1.1. Features

FM is frequency modulation radio. The frequency range is limited from 87.5 to 108.0 MHz (87.5MHz-108.0MHz). It supports auto search channel.

NOTE: When playing FM, if there is an incoming call or outgoing call, FM will be shut off automatically; when incoming call or outgoing call is finished, FM will be resumed automatically at the last frequency.

2. AT Commands

SIM800 series FM AT command overview.

Command	Description
AT+FMOPEN	Open FM
AT+FMCLOSE	Close FM
AT+FMFREQ	Set FM Frequency
AT+FMVOLUME	Set FM Volume
AT+FMSCAN	Auto Search Channel
AT+FMSIGNAL	Query Signal Level
AT+FMVALID	Check Frequency Valid

2.1. AT+FMOPEN Open FM

AT+FMOPEN Open FM	
Test Command AT+FMOPEN=?	Response +FMOPEN: (0-1) OK
	Parameter See Write Command
Read Command AT+FMOPEN?	Response +FMOPEN: <status>,<device> OK
	Parameter See Write Command If the status is 0, the default device is 0, but the device is meaningless.
Write Command AT+FMOPEN=<device>[,<freq>]	Response OK ERROR
	Parameter <status> 0 FM is closed 1 FM is opened <device> 0 Main audio channel 1 Aux audio channel <freq> 875-1080 The FM frequency. The range is limited from 875 to 1080 (87.5 MHz - 108.0 MHz)
Reference	Note

2.2. AT+FMCLOSE Close FM

AT+FMCLOSE Close FM	
Execution	Response
Command	OK
AT+FMCLOSE	ERROR
Reference	Note

2.3. AT+FMFREQ Set FM Frequency

AT+FMFREQ Set FM Frequency	
Test Command AT+FMFREQ=?	Response +FMFREQ: (875-1080)
	OK
	Parameter See Write Command
Read Command AT+FMFREQ?	Response +FMFREQ: <freq>
	OK
	Parameter See Write Command
Write Command AT+FMFREQ=<freq>	Response OK ERROR
	Parameter <freq> 875-1080 The FM frequency. The range is limited from 875 to 1080 (87.5 MHz - 108.0 MHz)
Reference	Note FM must have been opened.

2.4. AT+FMVOLUME Set FM Volume

AT+FMVOLUME Set FM Volume	
Test Command AT+FMVOLUME=?	Response +FMVOLUME: (0-6)
	OK
	Parameter See Write Command

Read Command AT+FMVOLUME?	Response +FMVOLUME: <value> OK
	Parameter See Write Command
Write Command AT+FMVOLUME=<value>	Response OK ERROR
	Parameter <value> 0-6 volume level
Reference	Note

2.5. AT+FMSCAN Auto Search Channel

AT+FMSCAN Auto Search Channel	
Execution Command AT+FMSCAN	Response [<channel> [<CR><LF> < channel > ...] OK
	Parameter <channel> auto search channel
Reference	Note FM must have been opened.

2.6. AT+FMSIGNAL Query Signal Level

AT+FMSIGNAL Query Signal Level	
Write Command AT+FMSIGNAL=<freq>	Response +FMSIGNAL: freq[<freq>]:<level> OK
	Parameter <freq> 875-1080 The FM frequency. The range is limited from 875 to 1080 (87.5 MHz - 108.0 MHz) <level> 0-112 Signal Level
Reference	Note FM must have been opened.

2.7. AT+FMVALID Check Frequency Valid

AT+FMVALID Check Frequency Valid	
Write Command AT+FMVALID= <freq>	<p>Response</p> <p>+FMVALID: freq[<freq>]:<valid></p> <p>OK</p> <p>Parameter</p> <p><freq> 875-1080 The FM frequency. The range is limited from 875 to 1080 (87.5 MHz - 108.0 MHz)</p> <p>< valid > 0 <freq> is not valid 1 <freq> is valid</p>
Reference	<p>Note</p> <p>FM must have been opened.</p>

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3. Examples

In the "Grammar" columns of following tables, input of AT commands are in black, module return values are in blue.

Grammar	Description
AT+FMOPEN=1 OK	Open FM. FM data would be outputted through aux audio channel
AT+FMVOLUME=6 OK	Set FM volume
AT+FMSCAN 948 950 952 954 956 962 968 OK	Auto search FM channel
AT+FMFREQ=948 OK	Set FM channel at 94.8MHZ
AT+FMSIGNAL=948 +FMSIGNAL: freq[948]:32 OK	Query 94.8MHZ signal level
AT+FMVALID=948 +FMVALID: freq[948]:1 OK	
AT+FMCLOSE OK	Close FM

Appendix

A Related Documents

SN	Document name	Remark
[1]	SIM800 Series_AT Command Manual	

B Terms and Abbreviations

Abbreviation	Description
FM	Frequency Modulation Radio

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