BLK-MD-SPK-B AT 命令应用指导

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目录

用户可以通过串口和 BLK-MD-SPK-A   芯片进行通信，实现蓝牙耳机/免提和立体声耳机功能。主控（MCU）通过串口发送简单的 AT 命令即可实现。串口使用 Tx，Rx 两根信号线，波特率支持 1200、2400、4800、9600、14400、19200、38400、57600、115200、230400、460800 和921600bps。串口缺省波特率为 9600bps。

1. 蓝牙应用状态介绍

HFP Status Value Description:
  1 Ready (to be connected)
  2 Connecting
  3 Connected
  4 Outgoing Call
  5 Incoming Call
  6 Ongoing Call

A2DP Status Value Description:
  1 Ready (to be connected)
  2 Initiating
  3 Signalling Active
  4 Connected
  5 Streaming

AVRCP Status Value Description:
  1 Ready (to be connected)
  2 Connecting
  3 Connected

Note:" |"   means one of status separated by it the module must in.
Example: HFP Status = 3 | 6, means HFP may be in Connected or Ongoing Call status.

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2. 应用编程接口（**AT**）

2.1 命令格式

AT#CMD<CR><LF>
AT#CMDsp <CR><LF>

其中，
AT# is command line prefix
CMD is basic command
sp is Sub-Parameter

2.2 指示格式

<CR><LF>IND<CR><LF>
<CR><LF>INDsp <CR><LF>
<CR><LF>IND ,,<CR><LF>

其中，
IND is basic indication
sp is Sub-Parameter ,, will be Sub-Parameter that may be omitted

3 Supported AT Command

AT Command	notion	Response Indication
CA	enter pairing	II
CB	cancel pairing	IJ2
CC	Connect hshf	IV
CD	Disconnect hshf	IA
CE	answer	IG
CF	reject	IF
CG	endcall	IF
CH	redial	IC
CI	voice call	PE/PF
CJ	Cancel voice call	PF
CM	toggle mic	OK
CO	transfer	MC/MD
CV	Delete pair, enter pairing	II

.

Command	Description	Response
CW<phonenum>	dial number	IC, IP<len>, IR<phonenum>
CX<dtmf>	send dtmf	
CY	Query status	OK
CZ	reset	MG<status>
MA	play/pause	IS<ver>, MF<ab>
MC	stop	MA/MB
MD	forward	MA
ME	backward	OK
MF	Query configuration	OK
MG	enable autoconn	OK
MH	disble autoconn	OK
MI	connect to av source	MB/MA
MJ	disconnect from av source	MY
MM<name>	change local name	MM<name>
MN<pin>	change pin	MN<pin>
MO	Query avrcp status	ML<status>
MP	enable auto answer	OK
MQ	disable auto answer	OK
MR	start FF	OK
MS	Start Rewind	Ok
MT	stop FF/Rewind	OK
MV	Query a2dp status	MU<status>
MY	Query version	MY<ver>
PA	sync pb by SIM	PA1/PA0
PB	sync pb by phone	PA1/PA0
PC	Read next pb item	IP<len>, MN<num>, PC
PD	Read previous pb item	IP<len>, MN<num>, PC
PH	sync pb by dialed	PA1/PA0
PI	sync pb by received	PA1/PA0
PJ	sync pb by missed	PA1/PA0
PK	sync pb by last call	PA1/PA0
PL	Get local last dialed list	IP<len>, MN<num>, PC
PM	Get local last received list	IP<len>, MN<num>, PC
PN	Get local last Missed list	IP<len>, MN<num>, PC
PO	Dial last received call	IC, IP<len>, IR<num>
PR	Clear Local call history	OK
VC	set clockdebug mode	OK
VD	decrease volume	OK
VE	enter test mode	OK
VF	set frequency	OK
VI	inquiry device	OK
VU	increase volume	OK

4 应用范例

1 ###
设置配对，可以被对方发现,命令:
AT#CA   /*discoverable for 2 minutes*/

返回:
II   /* HSHF enter pairing state indication*/
###
如果 2 mins 超时没有被其它设备连接或者配对，返回
IJ2   /* HSHF exits pairing mode and enters listening state indication*/
此时设备不能够被发现，如果需要被查找，重复第 2 步操作。
###
退出配对，不可以被对方发现,命令:
AT#CB   /*exit pairing mode, non-discoverable */

返回:
IJ2   /* HSHF exits pairing mode and enters listening state indication*/
###
2 ###
连接过程:
被动被连接:
首先要设置成可被查找(pairing)模式, 详见   步骤   1

远端设备开始连接 HSHF, 首先出现要求本地输入 PIN 码的请求，发送 PIN 码给对方,
当被连接以后，返回:
IV   /* HSHF State Is Connected indication */

###
3 ###
主动去连接最后一次连接的设备:
AT#CC   /* Connect to remote Device */

收到远端设备回复,要求本地输入 PIN
码: Pin 码要求请参考 3

最后, 收到 HSHF 的状态通知:
IV   /* HSHF State Is Connected indication */
如果手机蓝牙关闭或者手机不在蓝牙信号范围内，会收到状态通知：
IJ2   /* HSHF exits pairing mode and enters listening state indication*/

###

4 ##

断开连接， 需要发送命令：
AT#CD   /* ACL Disconnect from Remote */

会收到状态通知:
IA   /* HSHF State Is Listening */

对方断开连接，会收到状态通知:
IA   /* HSHF State Is Listening */
##

5   ##

查看用户名和密码
AT#MM   /* Get the BT device name */
AT#MN   /* Get the BT device pin code */

修改用户名和密码
AT#MMXX   /* Set the BT device name */
AT#MNYY   /* Set the BT device pin code */

返 回 :
MMXX
MNYY
Note: XX 为 BT 的名字，YY 为 Pin 码。XX 长度不超过 31，YY 长度不超过 15

##

6   ##
来电提示：
02150270176   /* 收到来电号码 02150270176 */

此时，可以拒接电话：AT#CF
返回：
IF   /* Call-setup status is idle */

或者接听电话：AT#CE
返回:
IG   /* ongoing call indication */

电话接通后可以主动挂断电话：AT#CG 返
回:
IF   /*hand-up indication */
或者对方挂断电话，返回:
IF   /*hand-up indication */

拨打最近一次呼出的电话号码,命令：
AT#CH
返回：
IC   /* Call-setup status is outgoing */

拨打电话:
举例：拨打 10086，命令：
AT#CW10086
返回：
IC   /* Call-setup status is outgoing */
IP5   /* Outgoing call number length indication*/
IR10086   /* Outgoing call number indication*/

发送 DTMF:
举例：发送数字 1，命令：
AT#CX1
返回：
OK   /* send DTMF successfully indication */
Note: 发送的参数支持(0-9, #, *, A-D)

Audio Transfer,命令：
AT#CO
当声音在 HSHF 侧的时候，返回：
MC   /* The voice is on Bluetooth indication */
当声音在手机听筒侧的时候，返回：
MD   /*The voice is on phone indication*/

语音拨号
AT#CI
返回：
PE   /* The voice dial start indication*/

PF   /* The voice dial is not supported indication*/

取消语音拨号
AT#CJ

返回：
PF   /* The voice dial is stopped indication*/

##
7###

Sync Phone Book by SIM
AT#PA
Sync Phone Book by Phone
AT#PB
Sync Phone Book by Dialed call
AT#PH
Sync Phone Book by Received call
AT#PI
Sync Phone Book by missed call
AT#PJ
Sync Phone Book by last call
AT#PK

返回：
PA0　　　　　/* The phone does not support the phone book feature */
或者：
PA1　　　　　/* The phone supports the phone book feature */

Read Next PB item
AT#PC
Read previous PB item
AT#PD

返回：
IPXX　　　　　/* The next or previous PB number length indication */
PBYY　　　　　/* The next or previous PB number */
注：此处以号码 "10086"为例，XX 为 "5"，YY 为 "10086"
8##
状态查询，命令：
AT#CY
返回：
MGX　　　　　/* The HSHF applications state is X indication*/
注：X 为返回消息的参数，1 – "Ready", 2 – "Connecting", 3 – "Connected", 4 –"outgoing call", 5 –"incoming call",6 – "ongoing call"。
##
9##
报告自动应答和开机自动连接配置，命令：
AT#MF
返回：
MGXY　　　　　/* X and Y are auto answer　and auto connect after power on configuration*/

注：X 为自动应答返回消息的参数，1 – "support auto answer", 0 – "not support auto answer"
Y 为开机自动连接返回消息的参数，1 – "support auto connect after power on", 0 – "not support auto connect after power on"

```
-------------------------------------------------------
打开自动应答，命令
AT#MG
关闭自动应答，命令
AT#MH

返回
OK              /* set successfully indication*/
-------------------------------------------------------
打开自动连接，命令
AT#MP
关闭自动连接，命令
AT#MQ

返回
OK              /* set successfully indication*/
```

###

5 AT 命令详解

Enter Pairing Mode #CA

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CA	Any	II	Enter Pairing Mode Indication

Description

This command puts the module in the pairing mode. The information response and causes will indicate the command success or failure. Enter pairing mode indication or failure indication will be sent to the host.

Note:

1.This command will cause a disconnection if module has already connected with some device.

2. Module will exit pairing mode if connection not happen in 2 minutes.

Syntax: AT#CA

5.2 Cancel Pairing Mode #CB

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CB	Pairing	IJ2	Exit Pairing Mode Indication

Description

If the module is in pairing mode, this command causes the module to exit the pairing mode and enter the idle mode. The information response and causes will indicate the command success or failure.

Syntax: AT#CB

5.3 Connect HFP to Handset #CC

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CC	HFP Status = 1	IV	Connecting Indication

Note: You can get current HFP status by #CY.

Description

This command causes the module to connect to a paired handset. The information response and causes will indicate the command success or failure. Connect Indication will be sent to the host after the connection is established. Otherwise Disconnect Indication will be sent to the host.

Syntax: AT#CC

5.4 Disconnect HFP from Handset #CD

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CD	HFP Status $\geq$ 3	IA	Disconnected Indication

Description

This command causes the module to disconnect from the connected handset. The information response and causes will indicate the command success or failure. Disconnect Indication will be sent to the host after the connection is dropped.

Syntax: AT#CD

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5.5 Answer Call #CE

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CE	HFP Status = 4	IG	Pick up Indication

Description

This command causes the module to answer an incoming call. The information response and causes will indicate the command success or failure.

Syntax: AT#CE

5.6 Reject Call #CF

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CF	HFP Status = 4	IF	Hang_Up Indication

Description

This command causes the module to reject an incoming call. The information response and causes will indicate the command success or failure.

Syntax: AT#CF

5.7 End Call #CG

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CG	HFP Status = 5 | 6	IF	Hang_Up Indication

Description

This command causes the module to end an active call. The information response and causes will indicate the command success or failure.

Syntax: AT#CG

5.8 Redial #CH

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CH	HFP Status = 3 | 6	IC	Outgoing Call Indication

Description

This command causes the module to redial the last number called in the phone. The information response and causes will indicate the command success or failure.

Syntax: AT#CH

5.9 Voice Dial #CI

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CI	HFP Status = 3	PE	Voice Dial Start Indication
		PF	Handset Not Support Void Dial

Description

This command causes the module to active voice dial functionary in the phone. The information response and causes will indicate the command success or failure.

Note: Voice dialing not works in some handset while .

Syntax: AT#CI

5.10 Cancel Voice Dial #CJ

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CJ	HFP Status = 3	PF	Voice Dial Stop Indication

Description

This command causes the module to cancel on going voice dial in the phone. The information response and causes will indicate the command success or failure.

Syntax: AT#CJ

5.11 Mute/Unmute MIC #CM

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CM	HFP Status = 6	OK	Command Accepted by Module

Description

This command causes the module to mute or unmute the MIC. The information response and causes will indicate the command success or failure.

Syntax: AT#CM

5.12 Transfer Call to/from Handset #CO

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CO	HFP Status = 6(without audio)	MC	HFP Audio Connected
	HFP Status = 6(without audio)	MD	MD HFP Audio Disconnect

Description

This command causes the module to transfer the active call from the module to the handset (MD will received) or from the handset to the module (MC will received). The information response and causes will indicate the command success or failure.

Syntax: AT#CO

5.13 Dial One Call #CW

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CW	HFP Status = 3	IC IP<lehgth> IR<phone number>	Outgoing Call Indication Length of Phone Number Current Call Indication

Description

This command causes the module to dial one call. The information response and causes will indicate the command success or failure.

Note: IP, IR indications only supported by HFP1.5 version.

Syntax: AT#CW13800138000

5.14 Send DTMF #CX

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CJ	HFP Status = 6	OK	Command Accepted

Description

This command causes the module to send one DTMF. The information response and causes will indicate the command

success or failure.
Syntax:
AT#CX1
AT#CX5

5.15 Query HFP Status #CY

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CY	Any	MG<code>	Report Current HFP Status

Description
This command queries the module's HFP current status. The information response and causes will indicate the command success or failure.
Syntax: AT#CY

5.16 Reset #CZ

Command	Current Status(s)	Possible Indication(s)	Indication Description
#CZ	Any	IS<version> MF<a><b>	Power ON Init Complete Report Auto Answer and PowerOn Auto Connection Configuration

Description
This command causes the module to reset. The information response and causes will indicate the command success or failure.
Syntax: AT#CZ

5.17 Play/Pause Music #MA

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MA	A2DP State = 5	MA MB	AV pause/stop Indication AV play Indication

Description
If the module is connected with a AV Source, this command causes the AV source to play/pause music. If module isn't connected AV source, this command will cause module try to connected current connected mobile's AV source. The information response and causes will indicate the command success or failure.
Syntax: AT#MA

5.18 Stop Music #MC

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MC	A2DP State = 5	MA	AV pause/stop Indication

Description
If the module is connected with a AV Source, this command causes the AV Source to Stop Music. The information response and causes will indicate the command success or failure.
Syntax: AT#MC

5.19 Forward Music #MD

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MD	A2DP State = 5	OK	Command Accepted by Module

Description
If the module is connected with a AV Source, this command causes the AV Source to Play next song. The information

response and causes will indicate the command success or failure.
Syntax: AT#MD

5.20 Backward Music #ME

Command	Current Status(s)	Possible Indication(s)	Indication Description
#ME	A2DP State = 5	OK	Command Accepted by Module

Description

If the module is connected with a AV Source, this command causes the AV Source to play last song. The information response and causes will indicate the command success or failure.
Syntax: AT#ME

5.21 Query Auto Answer and PowerOn Auto Connection Configuration #MF

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MF	Any	MF<a><b>	Report Auto Answer and PowerOn Auto Connection Configuration

Description

This command queries the module's auto answer configuration and poweron auto connect configuration. The information response and causes will indicate the command success or failure
Syntax: MF<a><b>
Value:
< a >: auto answer configuration, where 0: disable, 1: enabled
< b >: poweron auto configuration, where 0: disable, 1: enabled

5.22 Enable PowerOn Auto Connection #MG

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MG	Any	OK	Command Accepted

Description

This command enables the module to connect to the last used AG after PowerOn. The information response and causes will indicate the command success or failure.
Syntax: AT#MG

5.23 Disable PowerOn Auto Connection #MH

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MH	Any	OK	Command Accepted

Description

This command disables the module to connect to the Last used AG after PowerOn. The information response and causes will indicate the command success or failure.
Syntax: AT#MH

5.24 Connect to AV Source #MI

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MI	A2DP State = 1	MA	AV pause/stop Indication
		MB	AV play Indication

Description

If the module is connected with a HFP phone, this command causes the module try to connect to the phone's AV Source. The

information response and causes will indicate the command success or failure.
Note: Music will be played automatic after A2DP connected in some handset.
Syntax: AT#MI

5.25 Disconnect from AV Source #MJ

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MJ	A2DP Status ≥ 3	MY	AV Disconnect Indication

Description

This module causes the module to disconnect from the connected phone's AV source. The information response and causes
will indicate the command success or failure.
Syntax: AT#MJ

5.26 Change Local Device Name Casually #MM

Command	Current Status(s)	Parameters	Possible Indication(s)	Indication Description
#MM	Any	[new name]	[MM<current name>]	Report Current Local Device Name

Description

This command causes the module to change the device name. The information response and causes will indicate the command
success or failure.
Syntax: AT#MM<new name>
Value:< new name >: local device name

※ If new name is empty, the module will report current local device name.

example:
AT#MMMy Car Kit\r\n :the new name is "My Car Kit"
AT#MM\r\n :indication will be MM<current name>

5.27 Change Local Device Pin Code #MN

Command	Current Status(s)	Parameters	Possible Indication(s)	Indication Description
#MN	Any	[new pin]	[MN<current pin>]	Report current local device Pin code

Description

This command causes the module to change the device pin code. The information response and causes will indicate the
command success or failure.
Syntax: AT#MN<new pin>\r\n
Value:<new pin >: local device pin (4 digital),

※ If new pin is empty, the module will report current local pin code.

example:
AT#MN1234 :the new pin is :1234
AT#MN :indication will be MP<current pin>

5.28 Query AVRCP Status #MO

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MO	Any	ML<code>	Report Current AVRCP Status

Description

This command queries the module's AVRCP current status. The information response and causes will indicate the command
success or failure.

Syntax: AT#MO
Code Status
    1 Ready (to be connected)
    2 Connecting
    3 Connected

5.29 Enable Auto Answer #MP

Command	Current Status(s)	Parameters	Indication Description
#MP	Any	OK	Command Accepted

Description

This command enables the module auto answer an incoming call. The information response and causes will indicate the command success or failure.
Syntax: AT#MP

5.30 Disable Auto Answer #MQ

Command	Current Status(s)	Parameters	Indication Description
#MQ	Any	OK	Command Accepted

Description

This command disables the module auto answer an incoming call. The information response and causes will indicate the command success or failure.
Syntax: AT#MQ

5.31 Start Fast Forward #MR

Command	Current Status(s)	Parameters	Indication Description
#MR	A2DP Status = 5	OK	Command Accepted by Module

Description

If the module is connected with a AV Source, this command causes the AV Source to start fast forward. The information response and causes will indicate the command success or failure.
Syntax: AT#MR

5.32 Start Rewind #MS

Command	Current Status(s)	Parameters	Indication Description
#MS	A2DP Status = 5	OK	Command Accepted by Module

Description

If the module is connected with a AV Source, this command causes the AV Source to start rewind. The information response and causes will indicate the command success or failure.
Syntax: AT#MS

5.33 Stop Fast Forward / Rewind #MT

Command	Current Status(s)	Possible Indication(s)	Indication Description
#MT	A2DP Status = 5 (after started Fast Forward or Rewind)	OK	Command Accepted by Module

Description

If the module is connected with a AV Source, this command causes the AV Source to stop fast forward or rewind. The information response and causes will indicate the command success or failure.

Syntax: AT#MT

5.34 Query A2DP Status #MV

Command	Current Status(s)	Parameters	Indication Description
#MV	Any	MU<code>	Report Current A2DP Status

Description

This command queries the module's A2DP current status. The information response and causes will indicate the command success or failure.

Syntax: AT#MV

<code>:1-5, status of A2DP

    1 Ready

    2 Initiating

    3 SignallingActive

    4 Connected

    5 Streaming

5.35 Query Module Software Version #MY

Command	Current Status(s)	Parameters	Indication Description
#MY	Any	MW<version>	Report Module Software Version

Description

This command queries the module's software version. The information response and causes will indicate the command success or failure.

Syntax: AT#MY

5.36 Synchronize Phonebook Stored by SIM(via AT Command) #PA

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PA	HFP Status = 3	PA1 PA0	Phonebook Synchronize Indication Command Not Supported

Description

This command causes the module to synchronize the phonebook which is stored by SIM. The information response and causes will indicate the command success or failure.

Syntax: AT#PA

5.37 Synchronize Phonebook Stored by Phone(via AT Command) #PB

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PB	HFP Status = 3	PA1	Phonebook Synchronize Indication
		PA0	Command Not Supported

Description

This command causes the module to synchronize the phonebook which is stored by phone. The information response and causes will indicate the command success or failure.

Syntax: AT#PB

5.38 Read Next One Phonebook Item #PC

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PC	HFP Status = 3	IP<lehgth>	Length of Phone Number
		PB<phonebook>	One Phonebook Indication
		PC	End of Phonebook/Call History

Description

This command causes the module to read next one phonebook item from phone or local. The information response and causes will indicate the command success or failure.

Syntax: AT#PC

5.39 Read Previous One Phonebook Item #PD

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PD	HFP Status = 3	IP<lehgth>	Length of Phone Number
		PB<phonebook>	One Phonebook Indication
		PC	End of Phonebook/Call History

Description

This command causes the module to read previous one phonebook item from phone or local. The information response and causes will indicate the command success or failure.

Syntax: AT#PD

5.40 Synchronize Dialed Calls List (via AT Command) #PH

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PH	HFP Status = 3	PA1	Phonebook Synchronize Indication
		PA0	Command Not Supported

Description

This command causes the module to synchronize the dialed calls list. The information response and causes will indicate the command success or failure.

Syntax: AT#PH

5.41 Synchronize Received Calls List (via AT Command) #PI

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PI	HFP Status = 3	PA1	Phonebook Synchronize Indication
		PA0	Command Not Supported

Description

This command causes the module to synchronize the received calls list. The information response and causes will indicate the command success or failure.

Syntax: AT#PI

5.42 Synchronize Missed Calls List (via AT Command) #PJ

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PJ	HFP Status = 3	PA1 PA0	Phonebook Synchronize Indication Command Not Supported

Description

This command causes the module to synchronize the missed calls list. The information response and causes will indicate the command success or failure.

Syntax: AT#PJ

5.43 Synchronize Last Call List (via AT Command) #PK

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PK	HFP Status = 3	PA1 PA0	Phonebook Synchronize Indication Command Not Supported

Description

This command causes the module to synchronize the last call list. The information response and causes will indicate the command success or failure.

Syntax: AT#PK

5.44 Get Recent Dialed Call History (record by module) #PL

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PL	Any	IP<length> MN<phone number> PC	Length of Phone Number Indication One Phonebook Indication End of Phonbook/Call History Download Ind

Description

This command causes the module to read one of recently dialed call number(record by module). The information response and causes will indicate the command success or failure.

Syntax: AT#PL

5.45 Get Recent Received Call History (record by module) #PM

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PM	Any	IP<length> MN<phone number> PC	Length of Phone Number Indication One Phonebook Indication End of Phonbook/Call History Download Ind

Description

This command causes the module to read one of recently received call number(record by module). The information response and causes will indicate the command success or failure.

Syntax: AT#PM

5.46 Get Recent Missed Call History (record by module) #PN

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PN	Any	IP<length> MN<phone number> PC	Length of Phone Number Indication One Phonebook Indication End of Phonbook/Call History Download Ind

Description

This command causes the module to read one of recently missed call number(record by module). The information response

and causes will indicate the command success or failure.
Syntax: AT#PN

5.47 Dial Last Received Phone Number #PO

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PO	HFP Status = 3 | 6	IC IP\<length> IR\<phone number>	Outgoing Call Indication Length of Phone Number Indication Current Call Indication

Description

This command causes the module to dial last received phone number. The information response and causes will indicate the command success or failure.

Note: IP,IR indication only supported by HFP1.5 version.

Syntax: AT#PO

5.48 Clear Call History (record by module) #PR

Command	Current Status(s)	Possible Indication(s)	Indication Description
#PO	Any	OK	Command Accepted by Module

Description

This command causes the module to clear call history(record by module). The information response and causes will indicate the command success or failure.

Syntax: AT#PR

5.49 set clock debug mode #VC

Command	Current Status(s)	Parameters	Indication Description
#VC	Any	OK	Command Accepted

Description

This command causes the module to enter clock debug mode. The information response and causes will indicate the command success or failure.

Syntax: AT#VC

5.50 Speaker Volume Down #VD

Command	Current Status(s)	Parameters	Indication Description
#VD	Any	OK	Command Accepted

Description

This command causes the module to decrease the speaker volume. The information response and causes will indicate the command success or failure.

Syntax: AT#VD

5.51 Enter Test Mode #VE

Command	Current Status(s)	Parameters	Indication Description
#VE	Any	OK	Command Accepted

Description
This command causes the module to enter test mode. The information response and causes will indicate the command success or failure.
Syntax: AT#VE

5.52 Set to Fixed Frequency #VF

Command	Current Status(s)	Parameters	Indication Description
#VF	Any	OK	Command Accepted

Description
This command causes the module to work at 2404MHz. The information response and causes will indicate the command success or failure.
Syntax: AT#VF

5.53 Start Inquiry #VI

Command	Current Status(s)	Parameters	Indication Description
#VI	Any	OK	Command Accepted

Description
This command causes the module to inquiry Bluetooth devices. The information response and causes will indicate the command success or failure.
Syntax: AT#VI

5.54 Speaker Volume Up #VU

Command	Current Status(s)	Parameters	Indication Description
#VU	Any	OK	Command Accepted

Description
This command causes the module to increase the speaker volume. The information response and causes will indicate the command success or failure.
Syntax: AT#VU