

U S E R M A N U A L

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## 1) FOR DRIVER BUILD

Goto source code directory `mbt_src/`.  
`make [clean] build`  
 The driver binary can be found in `../bin_xxxx_btchar` directory.

## 2) FOR DRIVER INSTALL

- Copy `sd8790.bin` | `sd8787.bin` | ... to `/lib/firmware/mrvl/` directory, create the directory if it doesn't exist.
- Install bluetooth driver,  
`insmod bt8688.ko` | `bt8790.ko` | `mbt8787.ko` | ...
- Uninstall bluetooth driver and sdio bus driver,  
`hciconfig hciX down`  
`rmmmod bt8xxx` | `mbt8xxx`

The `mbtchar` driver should be loaded first.  
`insmod mbtchar.ko`

## 3) `cat /proc/mbt/hcix/status`

This command is used to get driver status.

## 4) `cat /proc/mbt/hcix/config`

This command is used to get the current driver settings.

## 5) `proc` commands to config bluetooth parameters

`drvdbg=[n]`

This command is used to set the bit masks of driver debug message control.

bit 0:	MSG	<code>PRINTM(MSG,...)</code>
bit 1:	FATAL	<code>PRINTM(FATAL,...)</code>
bit 2:	ERROR	<code>PRINTM(ERROR,...)</code>
bit 3:	DATA	<code>PRINTM(DATA,...)</code>
bit 4:	CMD	<code>PRINTM(CMD,...)</code>
bit 5:	EVENT	<code>PRINTM(EVENT,...)</code>
bit 6:	INTR	<code>PRINTM(INTR,...)</code>
...		
bit 16:	<code>DAT_D</code>	<code>PRINTM(DAT_D,...), DBG_HEXDUMP(DAT_D,...)</code>
bit 17:	<code>CMD_D</code>	<code>PRINTM(CMD_D,...), DBG_HEXDUMP(CMD_D,...)</code>
...		
bit 28:	ENTRY	<code>PRINTM(ENTRY,...), ENTER(), LEAVE()</code>
bit 29:	WARN	<code>PRINTM(WARN,...)</code>
bit 30:	INFO	<code>PRINTM(INFO,...)</code>

Usage:

`echo "drvdbg=0x7" > /proc/mbt/hcix/config` #enable MSG, FATAL, ERROR messages

`gpio_gap=[n]`

This command is used to configure the host sleep parameters.

bit 8:0 -- Gap  
 bit 16:8 -- GPIO

where GPIO is the pin number of GPIO used to wakeup the host. It could be any valid GPIO pin# (e.g. 0-7) or 0xff (Interface, e.g. SDIO will be used instead).

where Gap is the gap in milli seconds between wakeup signal and wakeup event  
or 0xff for special setting.

Usage:

```
echo "gpio_gap=0xff80" > /proc/mbt/hcix/config      # use Interface (e.g. SDIO)
echo "hscfgcmd=1" > /proc/mbt/hcix/config          # gap = 0x80

echo "gpio_gap=0x03ff" > /proc/mbt/hcix/config      # use gpio 3
echo "hscfgcmd=1" > /proc/mbt/hcix/config          # and special host sleep mode
```

psmode=[n]

This command is used to enable/disable auto sleep mode

where the option is:

```
1      -- Enable auto sleep mode
0      -- Disable auto sleep mode
```

Usage:

```
echo "psmode=1" > /proc/mbt/hcix/config            #enable power save mode
echo "pscmd=1" > /proc/mbt/hcix/config

echo "psmode=0" > /proc/mbt/hcix/config            #disable power save mode
echo "pscmd=1" > /proc/mbt/hcix/config
```

## 6) Use hcitool to issue raw hci command, refer to hcitool manual

Usage: Hcitol tool cmd <ogf> <ocf> [Parameters]

### 1. Interface Control Command

```
hcitool cmd 0x3f 0x5b 0xf5 0x01 0x00  --Enable All interface
hcitool cmd 0x3f 0x5b 0xf5 0x01 0x01  --Enable Wlan interface
hcitool cmd 0x3f 0x5b 0xf5 0x01 0x02  --Enable BT interface
hcitool cmd 0x3f 0x5b 0xf5 0x00 0x00  --Disable All interface
hcitool cmd 0x3f 0x5b 0xf5 0x00 0x01  --Disable Wlan interface
hcitool cmd 0x3f 0x5b 0xf5 0x00 0x02  --Disable BT interface
```

## 7) cat /proc/mbt/hcix/debug

This command is used to get driver debug parameters.

## 8) proc command to config debug parameters

sdcmd52rw=<func> <reg> [data]

This command is used to read/write a controller register in  
Secure Digital I/O Interfaces.

func: The function number to use (0-7)

reg: The address of the register

data: The value to write, read if the value is absent

For SDIO MMC driver, only function 0 and BT function (2/3) access is allowed.

And there is a limitation for function 0 write, only vendor specific CCCR  
registers (0xf0 -0xff) are permitted.

Usage:

```
echo "sdcmd52rw= 2 3 0xf" > /proc/mbt/hcix/debug  # write 0xf to func 2 address 3
echo "sdcmd52rw= 0 4" > /proc/mbt/hcix/debug      # read func 0 address 4
```

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