

WoWWee MiP

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<http://joost.damad.be/2013/08/experiments-with-bluetooth-low-energy.html>

<https://www.safaribooksonline.com/library/view/getting-started-with/9781491900550/ch04.html>

Install bluez v5.3

TODO

<http://www.bluez.org/download/> > bluez-5.27.tar.xz

bluez 5.27 :

```
$ sudo apt-get install libdbus-1-dev libudev-dev libical-dev
```

Error : "checking systemd system unit dir... configure: error: systemd system unit directory is required"

<http://askubuntu.com/questions/343663/ubuntu-13-04-and-bluez-5-8-configure-error-systemd-system-unit-directory-is-re>

```
$ ./configure --prefix=/usr --mandir=/usr/share/man --sysconfdir=/etc --localstatedir=/var
```

```
--enable-experimental --with-systemdsystemunitdir=/lib/systemd/system
```

```
--with-systemduserunitdir=/usr/lib/systemd
```

```
$ make
```

XPeria developer options

- For people who are facing problems in accessing developer settings here's the trick
- Go to Settings>About phone
- Tap on the build number 7 times
- Enjoy developer options

Using bluetooth device

```
$ hciconfig
```

Devices:

```
hci1 00:1A:7D:DA:71:11
```

http://doc.ubuntu-fr.org/bluetooth#problemes_connus :

```
$ sudo rfkill unblock all
```

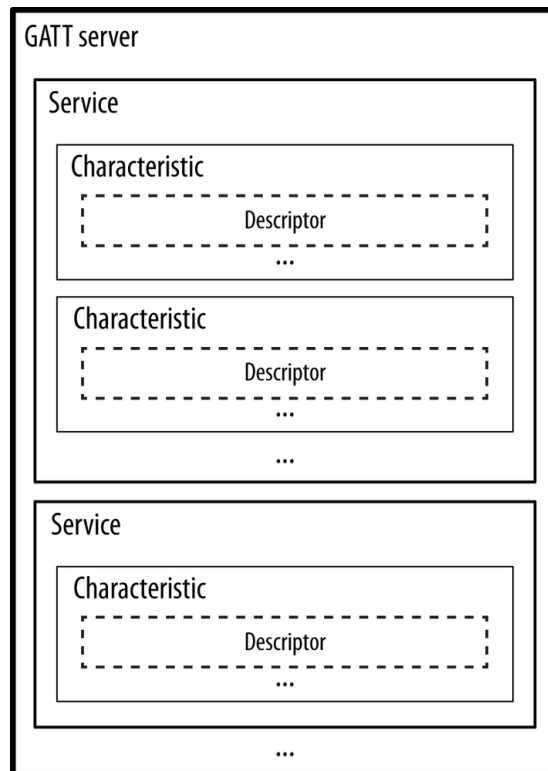
```
$ sudo hciconfig hci1 up
```

```
$ sudo hcitool -i hci1 lescan
D0:39:72:B7:AF:66 (unknown)
D0:39:72:B7:AF:66 Bubi
```

Connecting to MiP

```
$ sudo gatttool -i hci1 -b D0:39:72:B7:AF:66 -I
> connect
```

Get handles:



<http://www.jaredwolff.com/blog/get-started-with-bluetooth-low-energy/>
<http://i-miss-erin.blogspot.fr/2010/12/gatttool-in-bluez-over-bredr.html>

Discover all primary services:

```
> primary
attr handle: 0x0011, end grp handle: 0x0014 uuid: 0000ffe5-0000-1000-8000-00805f9b34fb
Send Data Service: 0xFFE5
attr handle: 0x000c, end grp handle: 0x0010 uuid: 0000ffe0-0000-1000-8000-00805f9b34fb
Receive Data Service: 0xFFE0
```

Discover characteristics:

```
> characteristics
handle: 0x0012, char properties: 0x0c, char value handle: 0x0013, uuid:
0000ffe9-0000-1000-8000-00805f9b34fb
Send Data WRITE Characteristic: 0xFFE9
handle: 0x000d, char properties: 0x10, char value handle: 0x000e, uuid:
0000fe4-0000-1000-8000-00805f9b34fb
```

Receive Data NOTIFY Characteristic: 0xFFE4

Discover All Characteristic Descriptors:

> char-desc

Sending orders

LEDs are characteristics;

serviceld: MIPSendDataService, ffe5

characteristicId: MIPSendDataWrite, ffe9

value: SetChestLED; 0x84 r g b

<https://github.com/WowWeeLabs>

<https://github.com/WowWeeLabs/MiP-BLE-Protocol>

Command doc:

<https://github.com/WowWeeLabs/MiP-BLE-Protocol/blob/master/MiP-Protocol.md>

Read LED:

char-write-cmd <handle> value

> char-read-hnd 0x83

<https://stackoverflow.com/questions/25536695/wowwee-mip-command-over-bluetooth-in-linux-shell-with-gatttool>

<http://www.compulab.co.il/utilite-computer/forum/viewtopic.php?f=77&t=1639>

Get firmware:

> char-write-cmd 0x0013 14

Set head LED

> char-write-cmd 0x0013 8A0202020201

Sounds:

> char-write-cmd 0x0013 0602

> char-read-hnd 0x000e

> char-write-cmd 0x0013 780060

Non interactive:

<http://www.humbug.in/2014/using-gatttool-manualnon-interactive-mode-read-ble-devices/>

Gatttool example

<https://gitorious.org/bluez/moreira-bluez-mainline/raw/0831238284de7dcf994bf9e2c350bb9acdc959e2:attrib/gatttool.c>

<http://people.csail.mit.edu/albert/bluez-intro/c404.html>