

How to change the BT Transceiver device name or passkey

This document details how to change some of your BT transceiver parameters: passkey; and Module name. This makes it easier to identify via BT wireless. Why do this? Well if you run more than one BT device you can easily get confused as to which device you are using and re-naming them helps and makes it look more “pro” as well.

Hardware required:

To modify the BT firmware you need a USB to TTL level converter module (or RS232 to TTL). I purchased this from MDFLY (model: MOL-CV4015, \$7.95, a Silicon Labs CPX210X chipset), however, there are plenty alternates on fleabay. You need to install drivers for this module on to your computer.

You will also need some “jumper fly leads” so you can connect between this module and the BT module. I used old computer CD audio cables and connectors. Just be careful you connect the wires correctly, more on this later. You need your BT transceiver as well.

Software required:

Mentioned above is that your USB to TTL level converter module requires system drivers to work correctly. These are usually downloadable from MDFLY or from the appropriate chipset manufacturer. In my case I used the Silicon Labs Chipset converter CPX210X chipset drivers.

You also need “Terminal emulation software” to communicate to the USB to TTL level converter module so it can pass communications to the BT module. I used the software from MDFLY, “MDCOM.exe” ver 1.0. I did try other emulation software to varying degrees of successfulness, “SSCOM32e.exe” also worked (both these are available from the internet). I could not get other emulation software: “realterm”; “COMTOOL”; or HyperTerminal did not communicate.

Install the appropriate software indicate on to your computer.

Module connections:

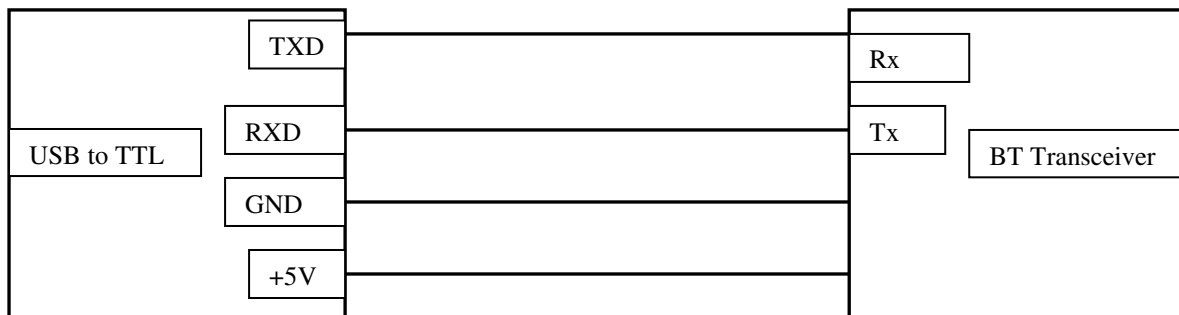
It is important to have the connections between the USB to TTL level converter module and the BT transceiver are correct. Connect the USB to TTL level converter module via USB to your computer. Now connect between this module and your BT module, via fly leads:

+5V to +5V;

GND (earth) to GND;

TXD (out) of level converter to Rx (in) on BT module.

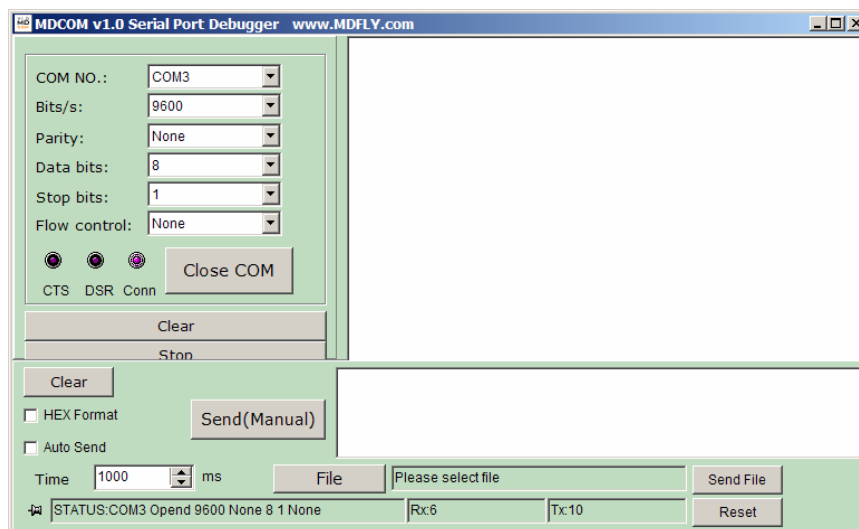
RXD (in) of level converter to Tx (out) of BT module.



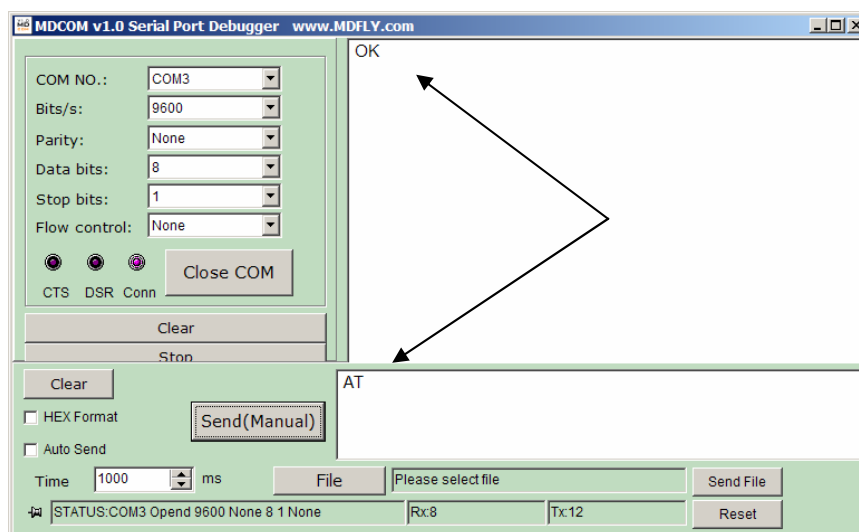
Programming parameters:

Once all connections are made and appropriate software installed run the MDCOM.exe program (or what ever emulation software you want). This opens a virtual emulation port to communicate to the level converter.

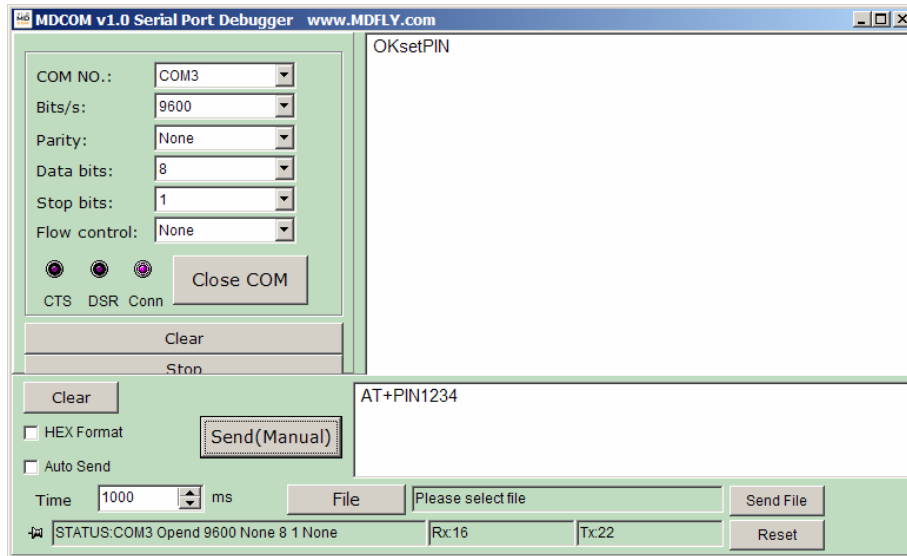
1. In this used: Baud “9600”; data “8bit”; stop bit “1”; parity “none”; flow control: “none” and press the Open COM text box to connect to the port. Also set you COM port to the appropriate USB device COM port used (use device manager to find this). The COM port for the BT device is the same as the USB to TTL level converter device, mine was COM3.



2. “SSCOM32e.exe also works but use: Baud “9600”; data “8bit”; stop bit “1”; verifybit “None”; flow control “hardware”.
3. 1st lets see if you can communicate to the BT module. The MDCOM software has 2 communications boxes, send and receive, see diagram.
 - In the Send box type “AT” (no quotes) and press the “send manual”. This will send the “AT” command to the BT module which in turn replies “OK” into the top (receive box).
 - This confirms we have the correct connections and the modules are communicating. Sweet! If not...check fly lead connections and program settings above.



4. Ok let's see if we can change the **BT module Pincode** (the default was 1234). In the send box type:
 - “AT+PINxxxx” (without quotes and xxxx is a new 4 digit pin you want to input to the BT module) and press “send manual”
 - You will receive “OKsetPIN”. This has now changed the BT module pincode.



5. Ok lets see if we can change the **BT module device name** (the default is LINVOR...or something like that). In the send box type:
 - a. “AT+NAMEdevicename” (without quotes and devicename is the new name you want to input to the BT module) and press “send manual”.
 - b. You will receive “OKsetNAME”. This has now changed the BT module name.

Well that wraps it up. Shut down the emulator and unplug it all down and your changes will be saved for evermore.

Brendan

Notes:

- The BT transceiver LED does not stop flashing when you connect and communicate with it via the USB/TTL device.
- In general you need a USB to TTL level converter module (or RS232 to TTL level converter) for your computer to talk to the BT device, however, some smarties have wirelessly connected to a BT module that is then connected to another BT module (watching to cross over the Rx/Tx transmissions). Aka, they do not need a Level converter!
- Ensure your BT device to the USB to TTL level converter is wired correctly (damage may result if wrong):
 - ◆ TXD out (on converter) to Rx in on transceiver
 - ◆ RXD out (on converter) to Tx in on transceiver.
 - ◆ Earth to earth.
 - ◆ + 5V to + 5V. Be aware some level converters are “+3.3V” input only. You cannot interconnect +5V to a +3.3V module. Further to this, some converter modules can accept either +3.3V or +5V so choose you level converter and connect wisely.

- If you do cross the Rx/Tx leads incorrectly the device will just not communicate. No damage will (should) happen, however if you cross the power and earth, “the skies will fall”!
- Do not use a USB extension lead.
- The data LED on the USB to TTL level converter does flash when data is sent but only for a very short time. You may not see this.
- Be aware that some of the advanced AT commands for the HC-05/06 BT transceiver (if you troll the net you may find these) may not be accepted. They are disabled in the cheaper 06 modules, however, we are only interested in the basic command AT COMs such as name and pin so it's not a problem here.