Application Note: Over-the-Air Upgrade of MelodySmart v3.4.x to v3.7x

Introduction

Due to some limitations in the MelodySmart firmware, a specific upgrade procedure is required to correctly perform an OTA Upgrade of BC118 modules from MelodySmart v3.4.x to v3.7.0+. It only needs to be performed once per module.

Required equipment

To perform the upgrade, you will need the following:

- An Android phone with a recent OS version and the BlueCreation's BLE Explorer app installed (v2.0.13+)
- One or more BC118 devices running MelodySmart v3.4.x
- A PC-based UART terminal emulator, such as Putty, Hercules or CoolTerm.

Upgrade Procedure

1. Connect the board to the PC and open a UART connection to the BC118 module.
2. Using the UART interface, make sure that the BOND configuration parameter is set to OFF ("GET BOND"). If it is set to ON, please run the following sequence of commands: "SET BOND=OFF", "LBD", "WRT", "RST".
3. Connect to the BC118 module using BLE Explorer.
4. Press the "Upgrade Firmware" button at the bottom part of BLE Explorer.
5. In the firmware version selection popup dialog that appears, select the latest release of MelodySmart (3.7.4 at the time of writing).
6. Press the "Start OTAU" button.
7. The firmware image will now be downloaded and the OTAU process will begin. Make sure that the phone stays within range and doesn't run out of power.
8. After the OTAU process completes, the device will be running the latest firmware, but still need the next few steps for correct OTA Upgrades in the future.
9. Using the UART terminal, run the following sequence of commands: "SET BOND=ON", "WRT", "RST".
10. On the Android phone, go to the Bluetooth menu and manually unpair the device from the paired device list.
11. The upgrade procedure is now complete. Future upgrades will now work seamlessly, as long as the bonding information is preserved on the phone and on the BC118 module.

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