

# Serial Application Notes for iOS

## BT900/BL600/BL652

*Application Note*

v1.2

### INTRODUCTION

The Laird Serial allows bidirectional serial communication between an iOS device and a Laird BT900 (or BL600) module. This application can be used to remotely control the device through the use of AT commands. This application can run when the BT900/BL600 module is in VSP command mode.

### REQUIREMENTS

- PC running Windows XP or later
- UJTerminal 7.0.0 or later
- DVK-BT900 running firmware v9.1.2.0 or later; DVK-BL600 running firmware v1.5.70.0 or later; DVK-BL652
- USB A to mini B cable
- iOS device running iOS6 or higher with BT 4.0
- Internet connection on iOS device (to download the Laird Toolkit application from the App Store)
- Product User Guide
- FTDI Drivers <http://www.ftdichip.com/Drivers/VCP.htm> (for some versions of Windows)

### DEVELOPMENT KIT SETUP

- DC/USB power source switch (SW4) – USB
- 1.8V/3.3V switch (CON17) – 3.3V
- Autorun (CON12) – USB\_DTR-nAutorun

To setup the BT900 development kit, follow these steps. To configure the BL600 or BL652 please refer to their respective DVK User Manuals

1. Ensure that the module is in VSP mode and all dip switches are set correctly. See [Figure 1](#) and [Figure 2](#).

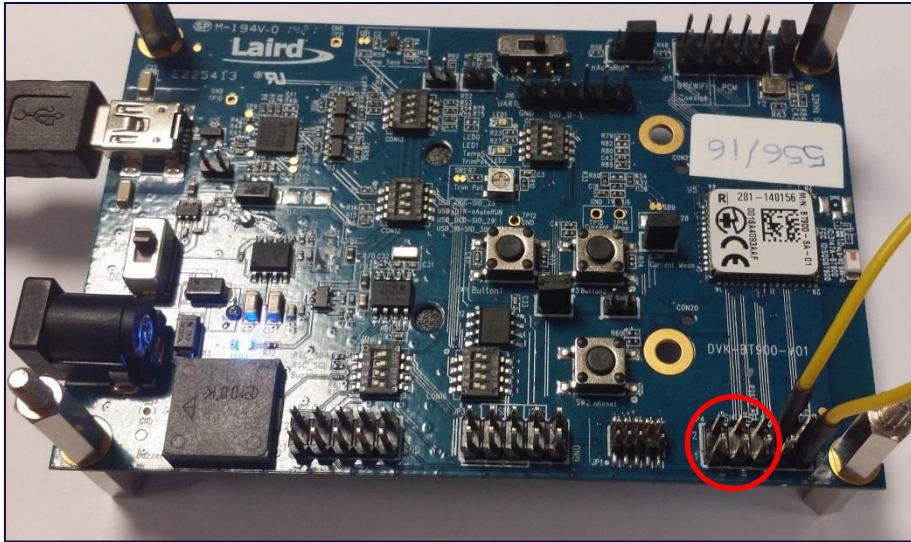


Figure 1: BT900 in VSP mode and jumper attached (front). Pins that the cable is attached: Ground and SIO\_19

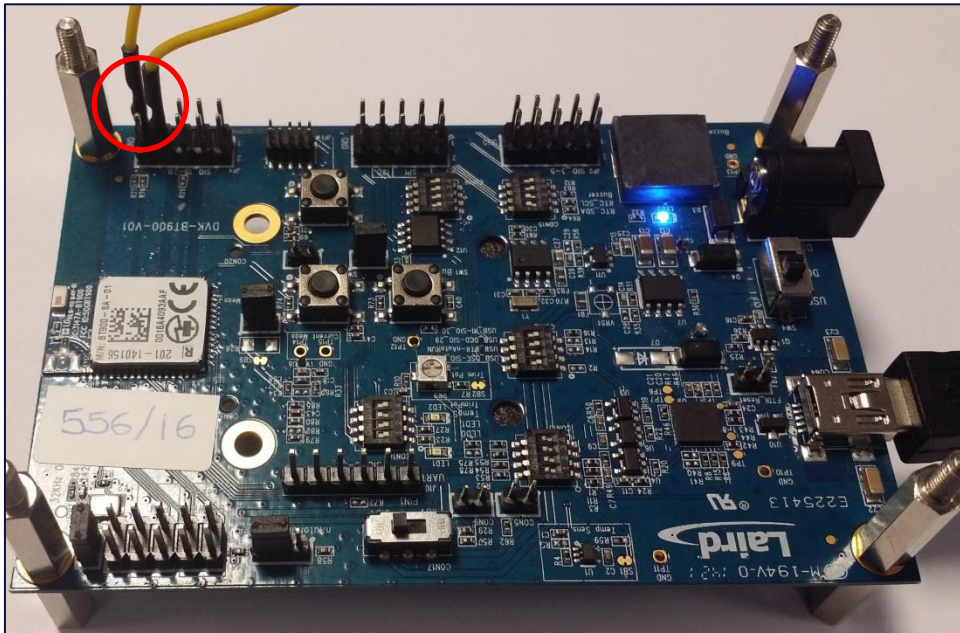


Figure 2: BT900 in VSP mode and jumper attached (back)

2. Connect one end of the mini USB cable to CON4 on the development board and the other end of the cable to your PC.
3. Follow the on-screen prompts. Depending on your version of Windows, you may need to install the FTDI drivers.  
When complete, the development board appears in the Windows device manager as a *USB Serial Port*. Make a note of the COM port number to use in step 5.
4. Extract UWTerminalX to a selected folder and run the program (no installation is required).
5. Configure the COM port with the port number seen in device manager with the following settings:

- Baudrate:
  - BT900: 115200
  - BL652: 115200
  - BL600: 9600
- Parity – None
- Stop Bits – 1
- Data Bits – 8
- Handshaking – CTS/RTS

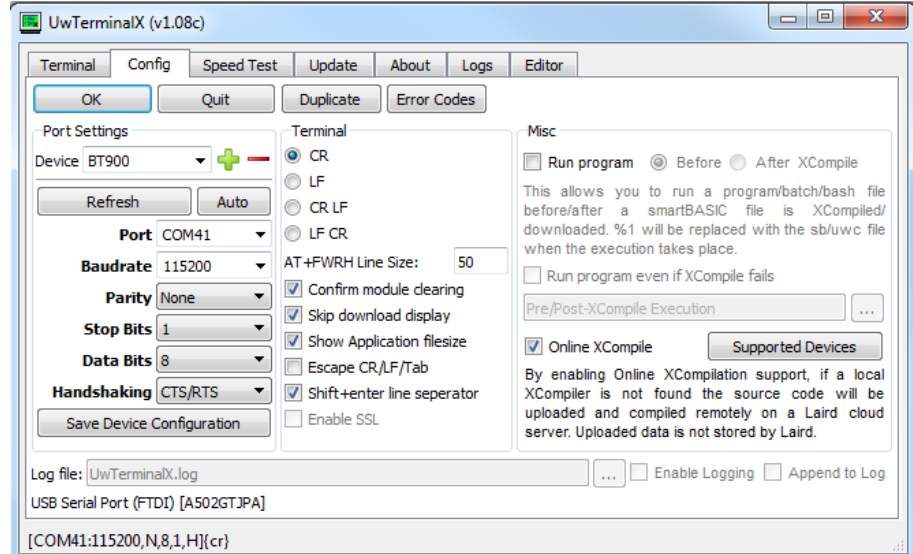


Figure 3: Comms settings

6. Confirm you can communicate with the development board by typing **at** followed by a <carriage return>. The module responds with **00**.

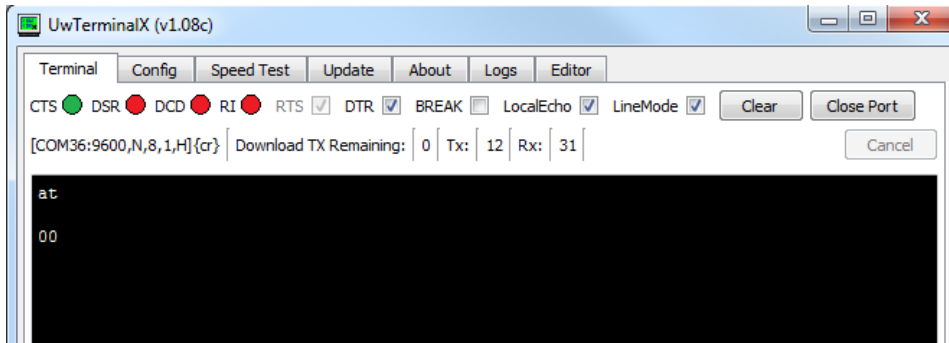
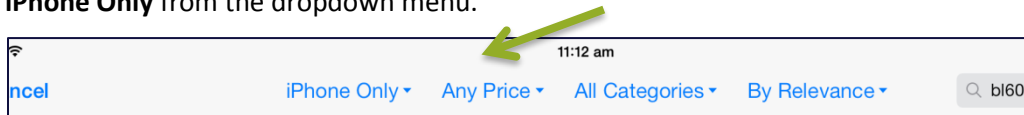


Figure 4: Comms OK.

## iPad/iPhone Setup

For iPad/iPhone setup, install the Laird Toolkit app from the Apple App Store and ensure Bluetooth is enabled in the device settings. If using an iPad and after searching the Laird Toolkit app doesn't appear in the results, select **iPhone Only** from the dropdown menu.



“Laird Toolkit” by Laird Technologies - <https://itunes.apple.com/us/app/laird-toolkit/id978146538?mt=8>



Figure 5: Laird Toolkit app installed

## USING THE LAIRD SERIAL APPLICATION

To use the Laird Serial application, tap the Laird Serial icon. The following figure (Figure 6) shows the Laird Serial screen.

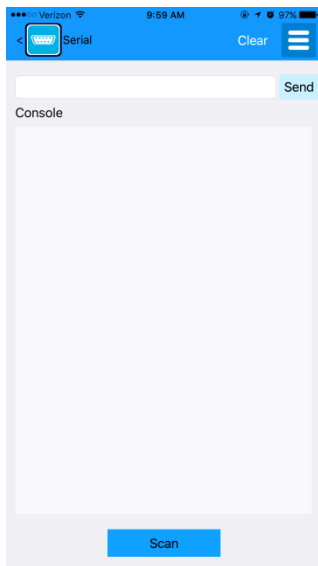


Figure 6: Laird OTA screen

1. To connect to a device, tap **Scan**. When the desired device displays, tap the device (Figure 7).

When the device is connected, the Scan button changes to Disconnect (Figure 8).

AT commands can now be sent. Refer to your product User Guide for detailed information regarding AT commands.

2. Tap the text field. Use the displayed keyboard to type in an applicable AT command.

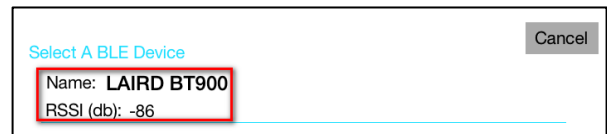


Figure 7: Device found, tap to connect

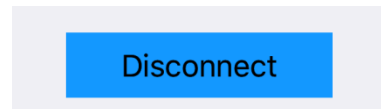


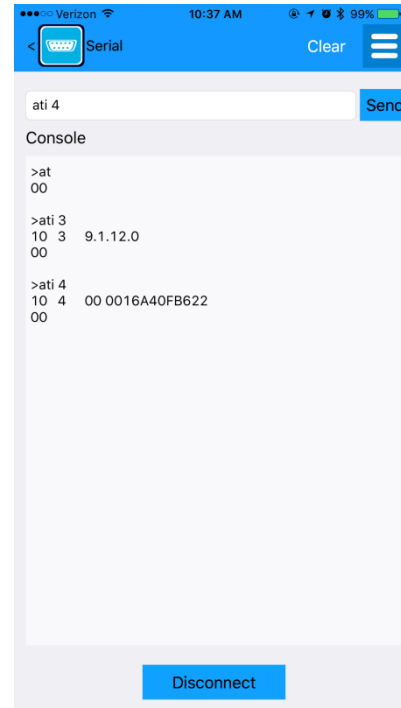
Figure 8: Disconnect button

- After typing a command, tap **Send** on the keyboard. After sending **at**, **at i 3**, and **at i 4**, the console screen displays the results shown in [Figure 9](#).

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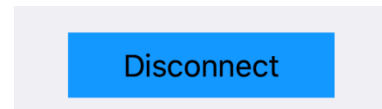
**Note:** Use the Clear button when the console screen is filled with commands.

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**Figure 9: Command displayed on the console**

- Disconnect the Laird Serial application by tapping **Disconnect** ([Figure 10](#)).



**Figure 10: Disconnect button**

## REVISION HISTORY

Revision	Date	Description	Approved By
1.0	05 Feb 2015	Initial Release	Jonathan Kaye
1.1	04 Mar 2015	Added revision history	Sue White
1.2	04 Jan 2017	Updated for UwTerminalX and new template	Jonathan Kaye