BD600+ Software Installation Procedure

NOTE: the following procedure is intended to be used on an un-programmed unit, but can be fully or partially used on a programmed one.

Requirements:

Computer running Windows (Win7 or later).
USB cable (standard type B plug)
BD600+ Install Software CD 217030 or pre-installed software

Procedure

1) If the software comes preinstalled on a Windows 10 laptop, follow the instructions on page 6 of this document. For a Windows 7 or 8 computer you must install a device driver as described on page 4 of this document (first time only). This installation is not supported on Windows XP or earlier, or on any Apple or Android computer.
2) Connect front panel and power connector to motherboard if update is performed on a bare board.
3) Plug in power cable and power up.
4) If the unit is open, check for 6 red leds by XLRs and one by power connector J1800.
5) Locate and run "bd600_update.bat" command file – this may be pre-installed on your computer, as part for a .zip file downloaded over the Internet, or can be found on the 217030 CD. This command file asks you to perform various checks and power cycles and is largely self-explanatory.

   Follow the onscreen instructions – for a normal update, this will be all you need to do.

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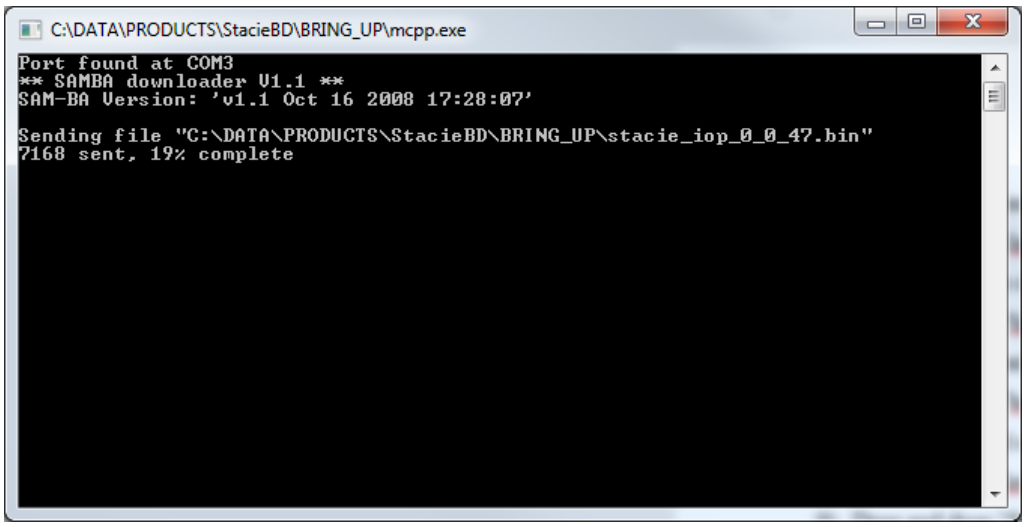
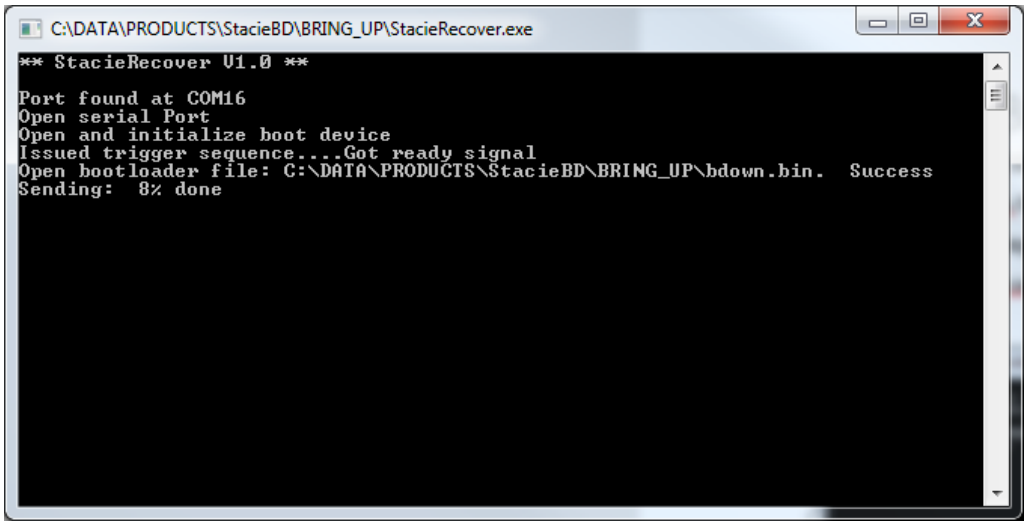
The instructions below duplicate the command file and are shown for completeness only.

1) Click SW600 (by USB connector).
2) Power cycle.
3) Connect USB to computer and BD600+. The computer should install drivers automatically, if not, they can be found on the CD in “atm6124_cdc_signed”.
4) Run “mcpp.exe”. Wait till complete (30 secs).



5) Power cycle. Confirm green flashing light by U1000. (it is red on the first 6 prototypes).
6) Run “StacieRecover.exe”.



7) Wait till complete (100 secs).

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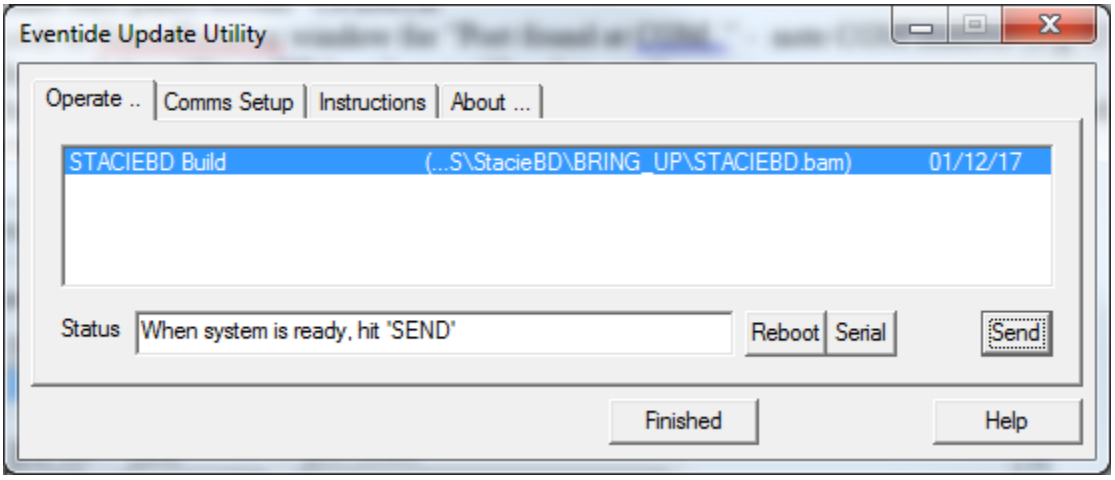
8) Make sure BD600+ panel scrolls “UPDATE”. If it does not, power cycle with “UPDATE” key held down.
9) Run “Oupdate.exe”.



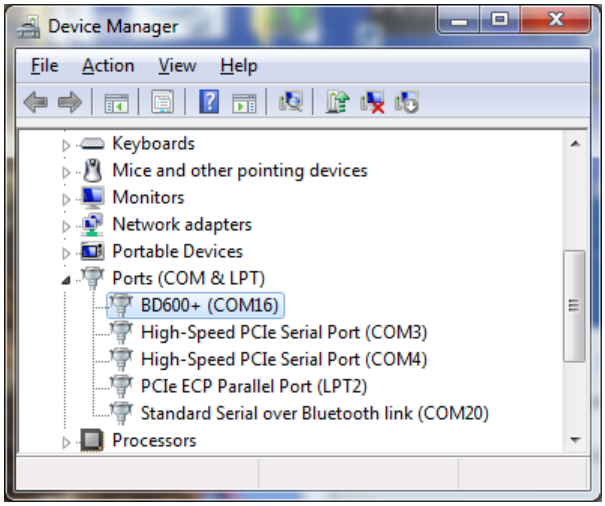
10) Wait till complete. (60 secs). If unsuccessful, hit Send to try again.
11) Make sure BD600+ panel scrolls “DONE”
12) Power cycle – confirm comes up with, display showing “----“, and BYPASS light flashing.
13) Confirm that repeatedly pressing the BYPASS button toggle the BYPASS light.
14) Confirm that green led at bottom right of board is flashing.

BD600+ Windows Driver Installation

Windows Driver Installation

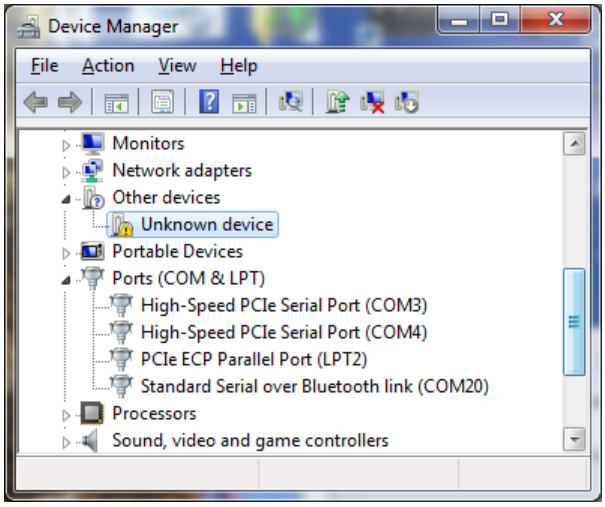
It is only necessary to install this driver when using USB on Windows 7 – later versions do not require it.

With the BD600+ powered up and connected to your computer by USB, bring up “Control Panel”, then “Device Manager”.



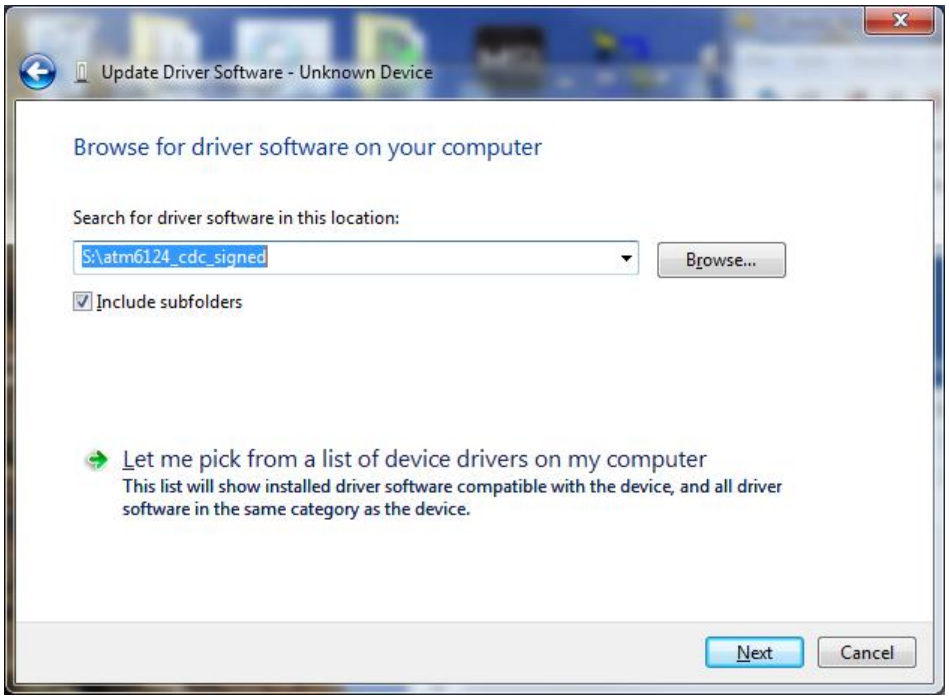
Look under “Ports (COM & LPT). If BD600+ is visible as shown above, this procedure is unnecessary.

Otherwise, if “BD600+” is not visible, look for “Unknown Device” under “Other Devices.”



Right-click on “Unknown Device” and select “Update Driver Software.”
Select “Browse my computer…..” You will see the following dialog.

BD600+ Windows Driver Installation



Hit the “Browse” button, and locate and select the CD drive containing the “BD600+ Install Software” CD. Hit “Next”. If you see a “Windows Security” window, click on “Install this driver….”

You should now see a “Windows has successfully updated….” Window. Hit “Close.”

Windows 10 Laptop

If the installation software is installed on a Windows 10 laptop, follow these instructions first.

1) Connect the power lead to the laptop (when fully charged it will run for about 4 hours on battery).
2) Press the power switch at the top right of the keyboard.
3) When it shows a picture, press on the bottom left of the mousepad.
4) Type in the password ("eventide") and hit the "enter" key.
5) When the screen is stable, look for a folder named "217030 Software …"
6) Using the mousepad, move the mouse over this and double-click with the bottom left edge of the mouse pad.
7) Follow the instructions in the main section of this document.
8) To shut the laptop down, press and hold the power switch until you see "Slide to shut down your PC." Then use the mousepad to drag the graphic to the bottom of the screen.

Initial Fault Finding

If there is a fault in either the sdram memory or the flash memory it will not be possible to fully install the software, and if the unit is re-booted the display will remain blank.

A small test utility is supplied to give more information about these faults. To run it, connect the USB cable and then drag and drop "smalltest.bin" on to "StacieRecover.exe". This will download for about 10 seconds, and then start running tests (ESC key will quit):

SDRAM Test

This will say OK if it passes (about 2 seconds per test), or BAD if it fails. In the latter case, it will give other information:
Failure code: a number following BAD:
1 – data bus fault around U200
2 – data bus fault around U205
3 – data bus fault around both U200 and U205
4 – address bus fault
8 – address bus fault around U200
16- address bus fault around U205
24 – address bus fault around both U200 and U205
32 – data bus fault during walking ones test

A data bus fault is usually caused by a solder short between 2 data lines, commonly on the chip side of the resistor packs. The "Val" field will give the hex value of the fault, for example if it gives 0004, this refers to D2, meaning that D3 is either floating, shorted to ground or Vcc, or (most likely) shorted to either D1 or D3.

An address bus fault is usually a shorted or floating address line. The "Addr" field will usually give the hex value for the bad address.

If the SDRAM fault is fixed, and the unit reset, it will usually boot properly.

Flash Test

This currently just says "BAD FLASH" if it fails. If the Flash fault is fixed, the software download procedure must be repeated.

General Tests

There are a number of more general tests to aid in faultfinding. These can be selected by entering one or more characters as described. You will probably have to wait until any running sdram test completes before seeing a result:

```
Command 'CX' - Cycle. X is between 1 and 5, other values exit.
This test will repeatedly perform a bus read or write operation at high speed,
allowing bus activity to be studied using an oscilloscope. Hit a key to quit.

X     address     data  operation
1     0xAAA       0xaa  'W',
2     0x555       0x55  'W',
3     0xAAA       0x90  'W',
4     0,          0,    'R',
5     2,          0,    'R',
```

Initial Fault Finding

Command 'EX' – Erase. X is A or B, other values exit.
Erase flash memory, either **A**ll, or just the **B**oot area.

Command 'FX' – Fill. X is A or B, other values exit.
Erase and then write and readback flash memory, either **A**ll, or just the **B**oot area.

Command 'WX' – Write flash. X is 1-3, other values exit.
This command causes various patterns to be written to flash memory for faultfinding purposes.
1 Write flash initialization values:

```
Write [0xAAA] = 0xaa;
Write [0x555] = 0x55;
Write [0xAAA] = 0x90;
Read  [0]
Read  [2]
Write [0] = 0xF0;
```

2 Write walking ones to data and first 4K addresses. This is useful for scope testing to spot missing or shorted address or data lines.

3 Alternate writes of [0xAAA] = 0xaa and [0x555] = 0x55. This is useful for scope testing to spot missing or shorted address or data lines.