

<sup>3</sup>D Touch and RapMan 3.2 Firmware Update Instructions

The firmware for the 3D TOUCH and RapMan 3.2 printers is pre-installed within the microcontroller on the printer's controller board. We are continually working to improve the firmware and will make new versions available on the website. You can download the updates and install them onto your printer using the BfB Firmware Loader Application. Any versic of firmware can be loaded i.e. you are not restricted to loading newer versions only.

## BfB Firmware Loader Application

To transfer the new application software to the printer you will need to run the <u>BfB firmware loader application</u> on your PC.



## Installing PC Drivers

When the printer is connected to a PC for the <u>first time only</u>, the following sequence should be followed in order to ensure that USB drivers are installed correctly. If a pinter firmware update has previously been performed with your computer, skip to the below section "Updating Your Printer Firmware".

- 1. Load the Firmware Loader Application on your computer
- 2. Turn the printer on
- 3. Connect the printer to your computer with a USB lead
- 4. Scroll to the far right of the printer menu to show the "UPDATE" icon
- 5. Press and hold the round function button then immediately tap the "UPDATE" icon once. Do not release the round function button until the USB bootloader screen shows.
- You need to tap the "UPDATE" icon within two seconds of pressing the function button otherwise the printer will switch off
- $\mathbf{6.}$  The printer display will state that it is in bootloader mode
- 7. Windows USB drivers should be installed and the Firmware Loader Application should state "Device connected" in the lower status area. If not, try closing the BFB Firmware Loader Application, and reconnect the USB lead

If it is not required to conserve existing printer settings through the firmware update (e.g. extruder offset calibration, Z height), the firmware update can be performed immediately by continuing from step 8 in the below section "Updating Your Printer Firmware". After the firmware update the printer settings will revert to default thus requiring entry of extruder offset calibration and Z height values before you can print again.

To conserve existing printer settings through the firmware update (recommended), perform the following steps:

- 1. Turn the printer power off and remove the USB lead. (Although the printer is in bootloader mode, the printer memory has not yet been erased so powering off at this time will not result in a non-functional printer.)
- 2. Continue from step 2 in the following section.

## Updating Your Printer Firmware

The printer contains user and calibration settings which are remembered when the power is switched off, however these settings are reverted to default when firmware is loaded. The firmware can save these settings to a USB memory stick during the update process so they can be restored into printer settings memory after the update, meaning calibration setting are not lost.

- 1. Load the Firmware Loader Application on your computer
- 2 Turn the printer on and insert a RFR branded USR memory stick

- 2. Turn the printer on and insert a bib branded obb memory Stick
- 3. Scroll to the far right of the menu to show the "UPDATE" icon
- 4. To save the settings to the USB memory stick and invoke firmware update mode, press and hold the round function button then immediately tap the "UPDATE" icon once. <u>Do</u> <u>not release the round function button until the USB bootloader screen shows</u>. You need to tap the "UPDATE" icon within two seconds of pressing the function button otherwise the printer will switch off
- 5. Firmware V5.1.0 onwards will show a brief confirmation if the settings were successfully saved to the USB memory stick, the printer display will state that it is in bootloader mode.
- $\boldsymbol{6}.$  Remove the USB memory stick and connect the printer to your computer with a USB lead
- 7. The Firmware Loader Application should state "Device connected" in the lower status area. If not, try closing the BFB Firmware Loader Application, remove the USB lead, re-open the BFB Firmware Loader Application, and reconnect the USB lead
- 8. Click the "Open Hex File" button and select the firmware .hex file downloaded from our website
- 9. Click the "Program/Verify" button to load the firmware
- 10. When the verify operation is complete, turn the printer power off and remove the USB lead. Do NOT use the "Reset Device" button shown on the Firmware Loader Application
- 11. Turn the printer power back on
- 12. Plug in the USB memory stick
- 13. Turn the printer on by holding the function button until the display lights up, shortly after a message should show to indicate that the printer settings were restored into the printer memory
- 14. The update and settings migration is complete, continue using the printer as normal

If there are any problems during the update and the printer does not function afterwards, the printer can be put into bootloader mode by following the steps below. The bootloader resides in a permanent area of memory that cannot be erased or corrupted during the firmware update process.

- 1. Turn the printer power off
- 2. Press and hold the round function button on the display panel
- 3. Turn the printer power on
- 4. The printer display should state that it is in bootloader mode

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