ShotTrack ViB User Guide

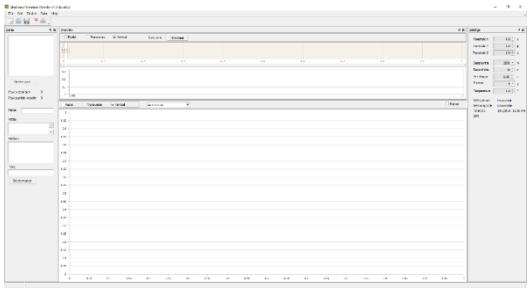
Contents

ShotTrack ViB HG

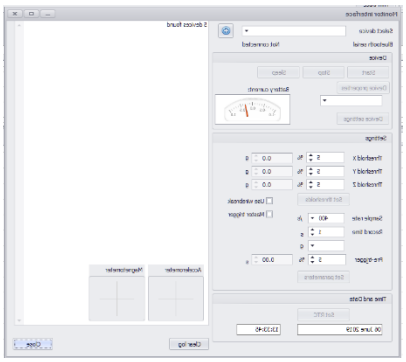
Set-Up unit

Switch the ShotTrack ViB Unit on that you want to setup

Double click on the ShotTrack ViB Monitor icon



The main window opens with no data displayed.

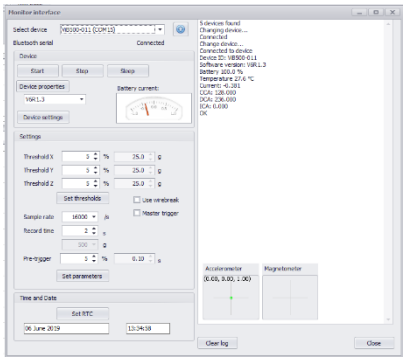


Device

From the main task bar click on Device

Click on the down arrow next to the Select device box

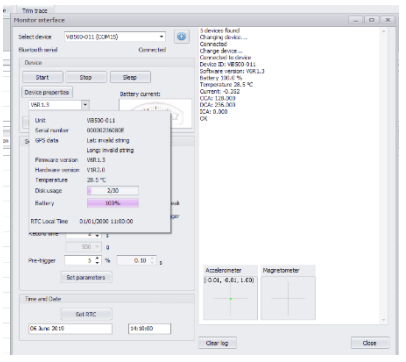
Choose the required unit



The current unit settings are displayed if connection is successful

There is a Battery current display that shows the battery discharge or charge status. If using an external power supply for example solar panels the rate of charge will be the amount of current available after suppling the working power for the unit for battery charging up to the maximum 1.2 Amp charge rate.

The static accelerometer and magnetometer (if fitted) will show orientation and heading information.



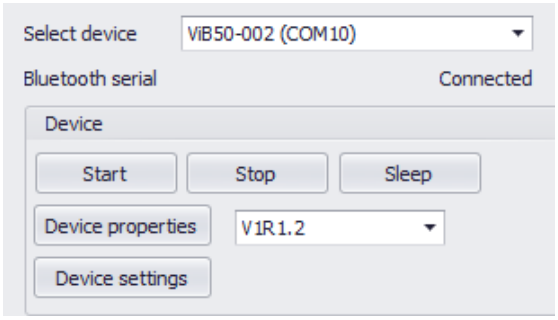
Get further information

Further information is displayed when the down arrow next to device properties selected.

- Serial number
- GPS Data if available
- Firmware version
- Hardware version
- Current temperature
- Disk usage (*erase all files in the data window if needed*)
- Battery capacity (*charge if needed*)
- Current Date and Time in units RTC (*in selected format*)

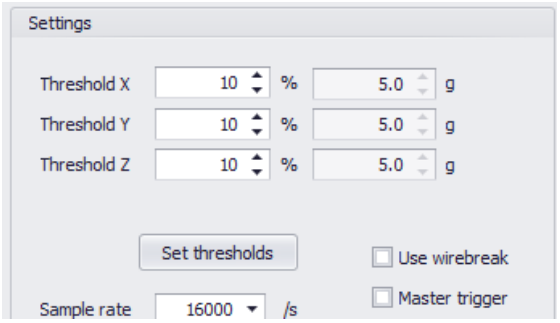
Device settings

There are 5 control buttons that have the following use:



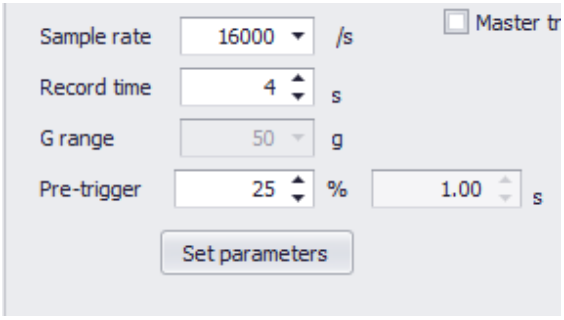
- Start: Initiates a software tigger (starts a sample). The sample starts one minute after command.
- Stop: Stops the unit from waiting for a trigger, unit will resume waiting for a trigger after a minute.
- Sleep: A reduced power mode that waits for communications before continuing.
- Device properties: This disconnects the bluetooth link and reconects it to get the device properties again.
- Device setting: Reloads all the device settings.

Thresholds



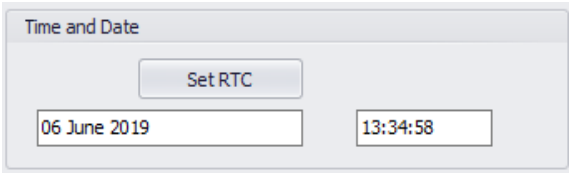
- There are 2 different trigger options either level threshold trigger or wire-break.
- The three-different axis have individual trigger level settings from 1% of full scale to 80%.
- Wire-break sets the unit to trigger on the external wire-break connection.
- Master trigger is not implemented in the current version of the Vibration monitor
- Once the levels have been set the **Set threshold** button updates the unit.

Parameters



- Sample rate can be set for 1,000 – 32,000 s/s
- Record time can be set up to the maximum times allowed by the various sample rates.
    - *Note a minimum of 8,000 samples should be selected with a combination of Record time and Sample rate*
- G Range is read only and shows the current units range.
- Pre-trigger is a percentage from 5% To 80% of the record time set. Changing either this or the Record time alters the actual trigger time.
- Once the values are selected the **Set parameters** button updates the unit.

Real Time Clock



- The Real Time Clock (RTC) should be set to the system time periodically to increase the accuracy.
- The RTC is used when there is no valid GPS connection for data timing and for the File Date/Time stamping

These settings are retained by the unit when switched off and to deploy the units with these pre-set settings is simply a matter of switching the unit on.

On the bench

Secure the unit to the surface using the dyno bolt connection

Turn the unit ON

- If wire-break triggering has been selected, then the unit will not arm itself until the wire-break cable is connected in a shorted condition. It will flash rapidly RED until a shorted cable is connected
- Walk away
- Unit will set itself after 2 minutes
- An alternate Blue and RED flash will indicate it is waiting for a level trigger.
- A Blue only flash will indicate it is waiting for a wire-break trigger.

After the shot

- The unit will reset itself after recording the data. If the trigger was a wire-break then the unit resets to Threshold triggering.
- If at any period a Bluetooth connection is made the unit will connect to the application.
- The data just recorded can be downloaded if required.
- The unit can have its operating parameters changed at any point using the Bluetooth connection

Switch off the unit

Press on/off button until it is illuminated with a solid Blue colour.

Firmware Update for ViB HG

To update the firmware on a ViB HG unit using Bluetooth you must follow these 4 steps.

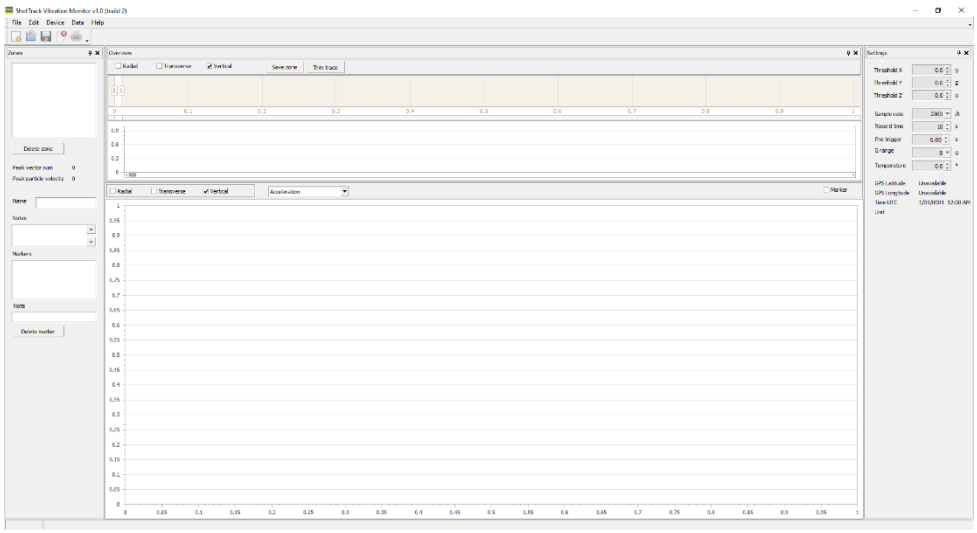
- The unit must be paired to the computer you are using.
- The unit must be registered to the PC software
- The unit must be set to upload mode.
- Using the Microchip PIC32 Bootloader Application (supplied) the new firmware has to be uploaded to the unit.

Warning: Download any files on the unit as these will be deleted during the update operation

- Switch on the ShotTrack ViB unit you wish to update

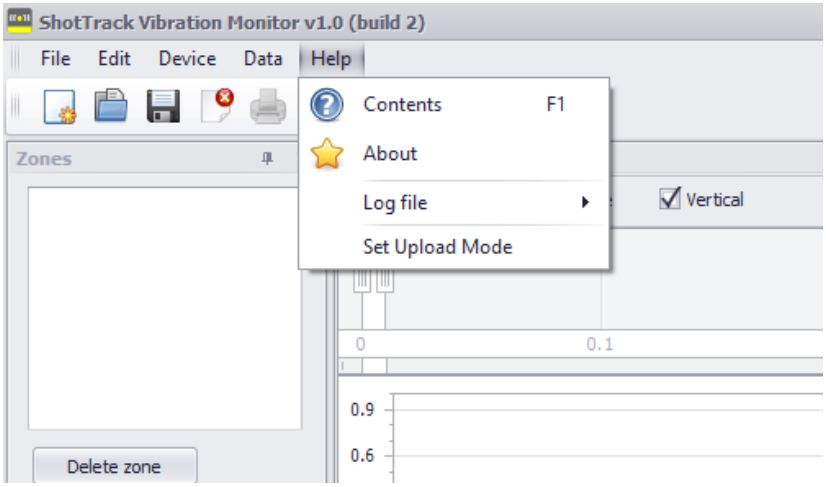
Open Program

- Double click on the ShotTrack ViB Monitor icon
- The main window opens with no data displayed.

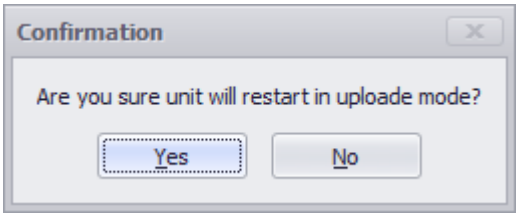


Go to help menu

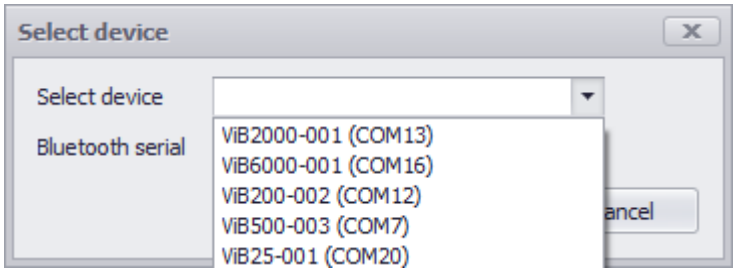
- Click on Set Upload Mode



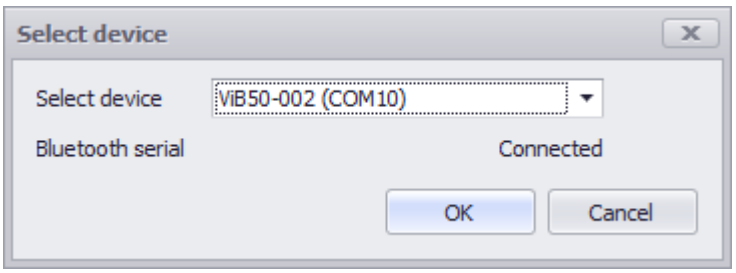
- You will be prompted to accept



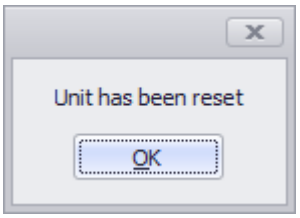
- A dialog box opens to with all registered units



- Choose unit to be updated



- Unit has been reset. It will automatically switch off at this point

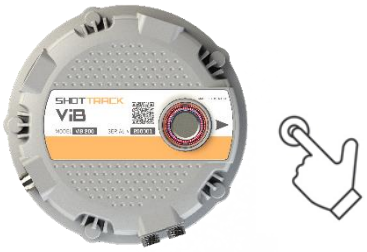


Start unit in bootload mode

Press and hold ON/OFF button

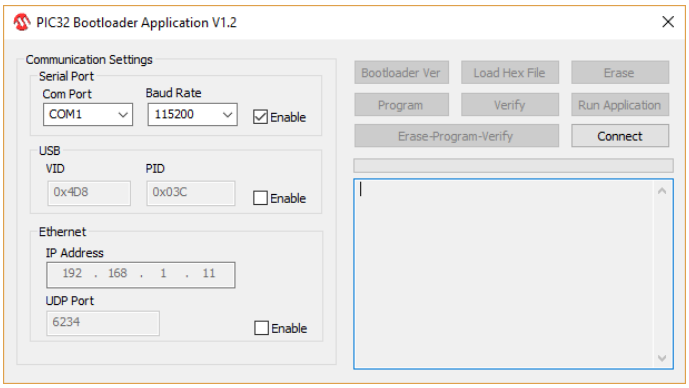
During the upload stage the ON/OFF button must be pressed the whole time.

Button will flash RED rapidly



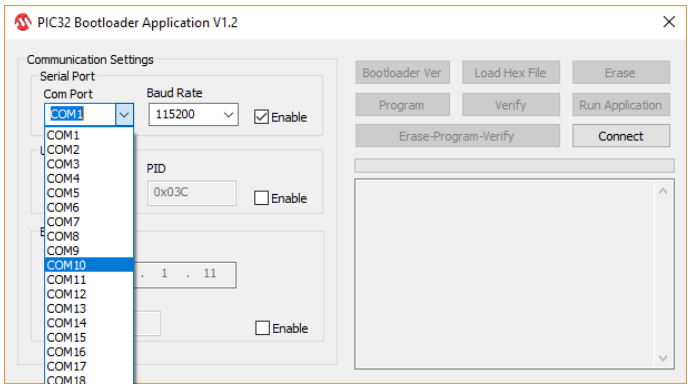
Uploading new Firmware

- Open the Microchip PC Bootloader Application.
- Press and hold ON/OFF button on unit.
- The button light will flash RED every half second.
- **Do not release until whole operation is completed**



Select Com Port

- Click on Com Port down arrow
- Choose the correct Com port
- Click on connect

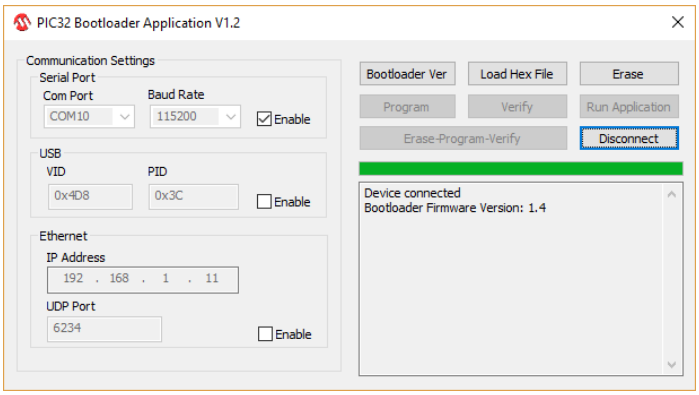


If connection can be made the status box shows Device connected and the Bootloader Firmware

Version number

Keep button pressed

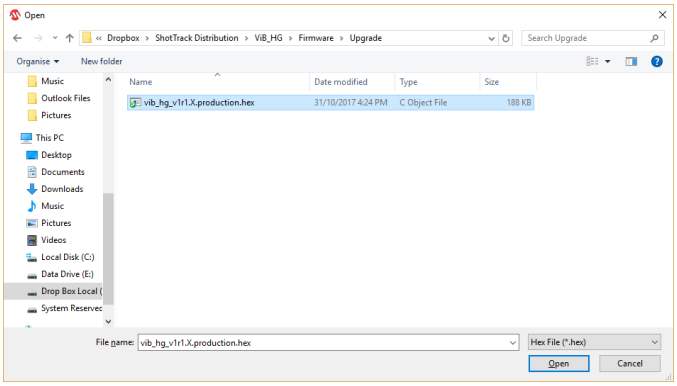
Button will change from RED flashing to BLUE flashing



Get new firmware file

Keep button pressed

- Click on Load Hex File.
- Navigate to where the new firmware is located.
- Select file
- Click OK

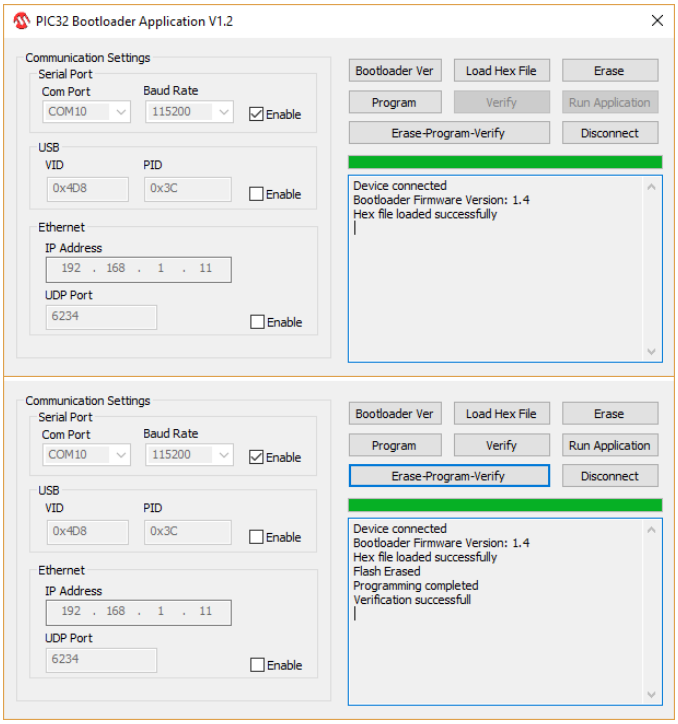


- Status box will indicate Hex file loaded successfully.

Keep button pressed

Program unit

- Click on Erase-Program-Verify
- The green bar will show progress.
- When finished the status box will show
- Verification successful on bottom line.



Keep button pressed

- Click on Run Application.

- Status box will show Command issued to run application.
- Button will stop flashing and illuminate Blue.

Release button now

The button will flash RED quickly as any files on the unit are deleted 16 flashes per file.

When finished the button will turn BLUE

- Exit PIC32 Bootloader Application