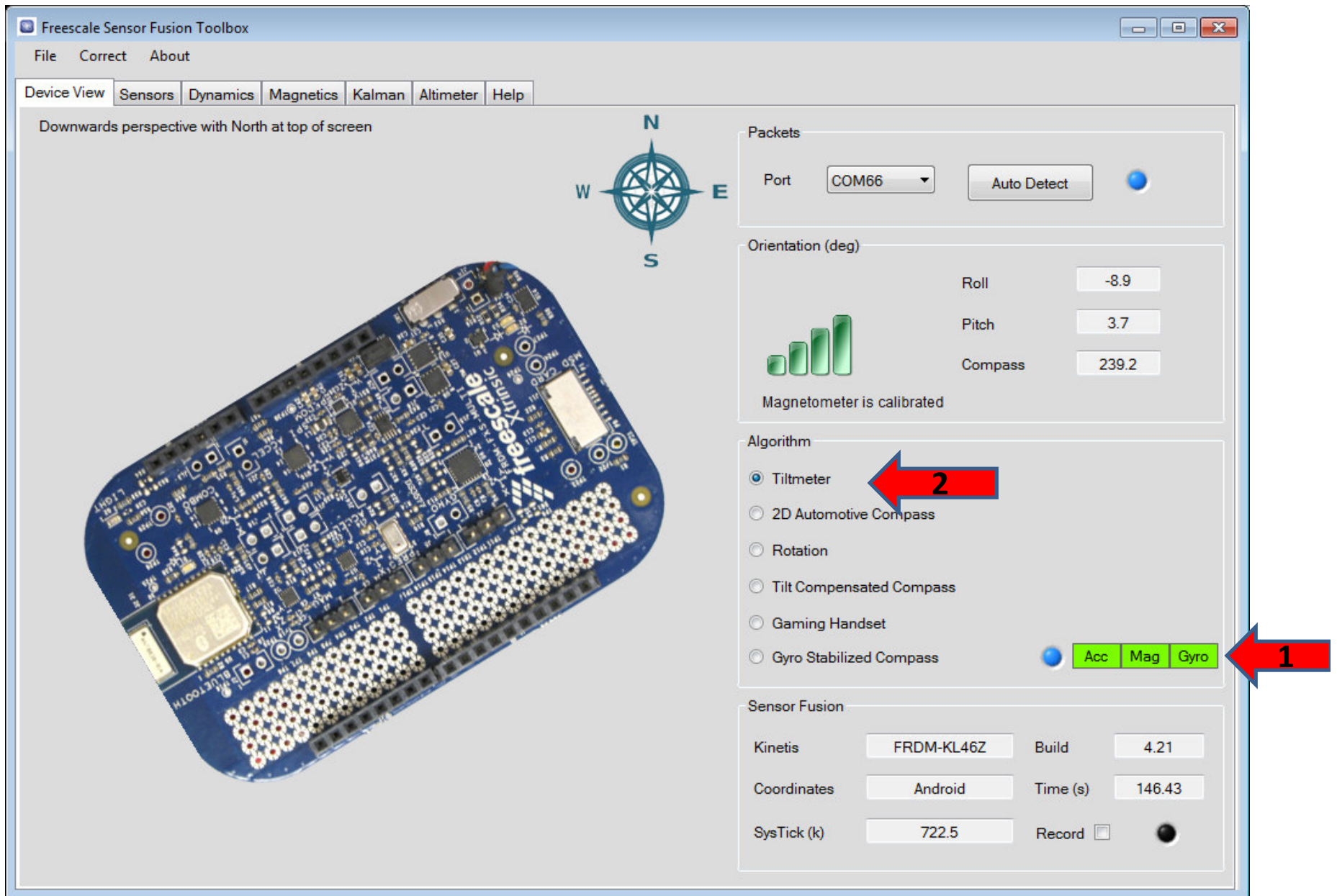


# Sensor Fusion Toolbox

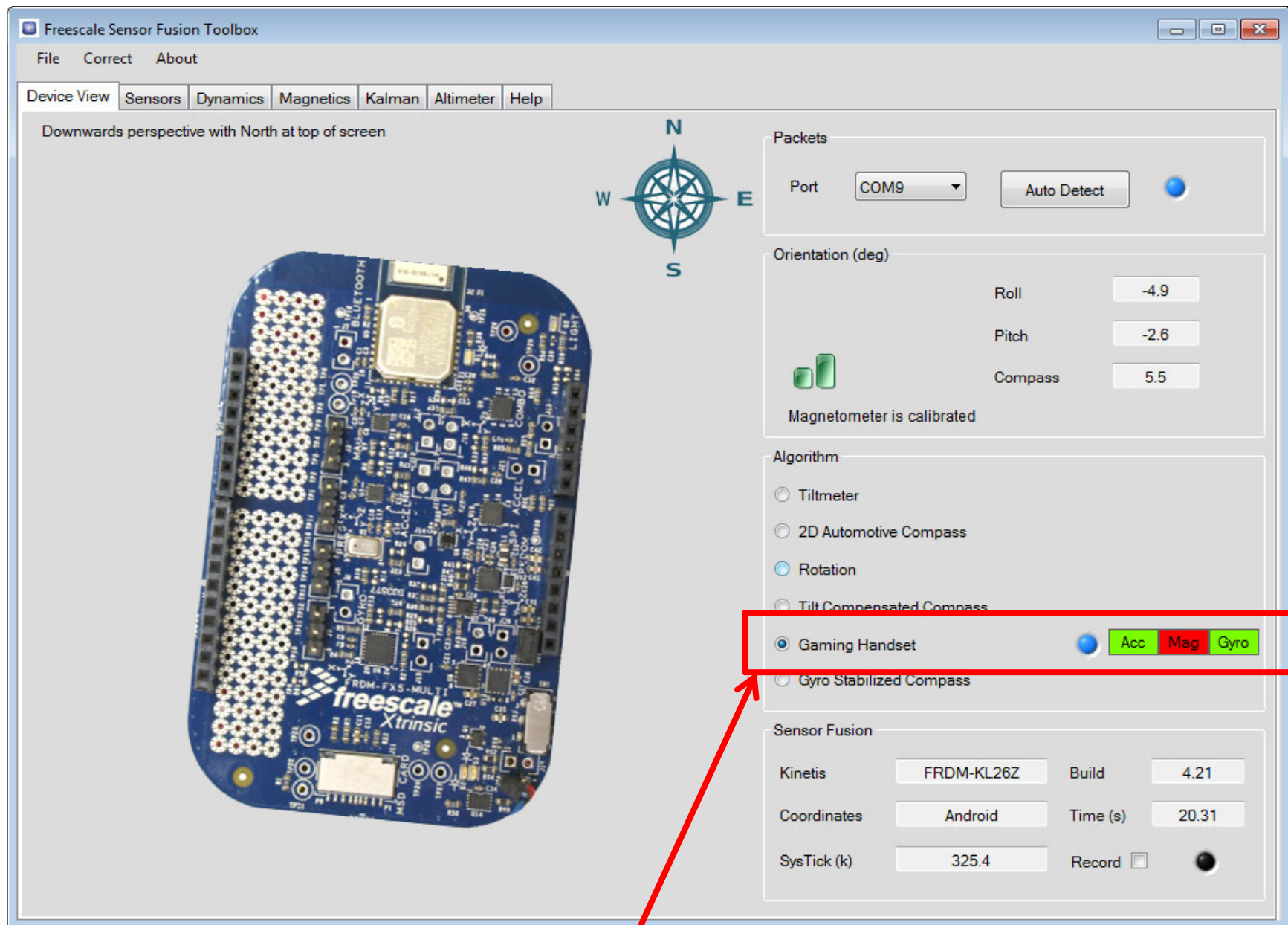
## communications problems

It is possible for the fusion toolbox software on Android or Windows to be “out of sync” with the operating mode of the embedded software running on a development board. On Windows, this is indicated by mismatched algorithm / sensor indicator on the main device view (see next two slides). On Android, this is indicated by a continuous series of beeps (from your Android device) that can occur when you try to switch algorithms, but the device does not respond properly.

Root cause is that command packets from PC or Android device are never seen by the embedded software. This can be caused by a number of things, which are listed in the final page of this file.



When (1) and (2) do not agree, it indicates that the application and board disagree as to which algorithm is active.



You want to see them agree

# Possible Root Causes (all have been observed)

- The GUI asked for an option not included in the embedded firmware build
- Command sent from GUI not recognized by embedded firmware
  1. Did you remove J7 when using wired mode?
  2. Did you forget J7 when using Bluetooth?
  3. Is the battery on your board low?
  4. Do you have more than one copy of the fusion toolbox running, or some other conflict for the serial port?
  5. Drag-and-drop of .s19 file can leave the Open SDA CDC serial port in a non-compatible state. Disconnect your USB cable, completely power cycle the Freedom board and reconnect.
  6. Download from the CW IDE followed by unplug/plug of the USB cable can have the same effect. You must cycle the power of the board completely.

Numbers 5 and 6 are believe resolved by changes to the embedded command interpreter in build 4.22.

Numbers 1 and 2 have been resolved in build 5.00 via the addition of redundant UART support.