14 LED Status Indicators

The instrument has two sets of red & green Light Emitting Diodes (LED's). These diodes are programmed to give specific flash sequences to indicate different states of operation of the instrument.

14.1 Power Circuit LED's

The main set of LED's are connected the power circuit of the communications board and are visually accessible via a light tube adjacent to the communications access port. They indicate whether the board is awake and whether the battery is charging.

14.1.1 LED Flash Sequence Definitions

14.1.1.1 Green LED
Usually indicates device is on / not in a low power state

14.1.1.2 Red LED
 Usually indicates device battery is charging.

14.1.1.3 Instrument Start-up
Green and Red LEDs blink alternately several times (this is also to indicate a successful reset). Green LED then turns on indicating that the board is powered on. Red LED may turn on depending on whether the device is charging. After a few seconds, the Green LED should blink, indicating that it has successfully initialised. After a timeout (depending on COM's activity between the two boards), both LEDs will turn off, indicating that the unit has entered a low power state.

14.1.1.4 Instrument Running
Every 10 seconds, the green LED will blink for a short amount of time. This indicates the board has powered on and is looking for a RF signal (generally a wake up signal). If a signal is received, it will stay on for a little longer to see if the messages are wake up messages or messages specifically for that unit. If so, the Green LED will stay on for another 30s-1minute.

14.2 USB Communication LED's

The second (and smaller set of LED's are connected to the USB communications port. They are located inside the communication port and are not visible if the communications port is closed. The USB LEDs tell you activity on the COM's lines when a USB cable is connected or wireless COM's via the MCC1 Radio Modem.

14.2.1 Red LED
Usually indicates data received. If the red LED is blinking occasionally and green one isn't that means that the software is trying to communicate with the board, which for some reason isn't responding.

14.2.2 Green LED
 Usually indicates data sent.

14.3 Device Firmware

When using the Device Firmware Update software (otherwise known as a Boot Strap Loader or BSL) to update the application board, the Red LED will continuously blink (regardless of what battery charging is doing). The board should not be powered down while the Red LED is blinking because it will halt the BSL process, and the microprocessor will not have been programmed correctly.

While performing BSL updating the generic COM′s board, the LEDs should be off, but could be in any state, because the microprocessor is being loaded with firmware, and is not controlling the LEDs.

14.4 Power down

When the power button is pushed, either a Green LED or Red LED will blink while you are holding the power button. If the Green LED blinks, the board will not switch off when you let go of the power button. This is most likely because it is powered externally, and cannot shut down. If the Red LED blinks, the board is ready to be powered down. Letting go of the power button will start the power down sequence, which will result in both LEDs blinking and fading out until the board is off.

NOTE 39: If power is applied to the external inputs during the power down sequence, power down is aborted and the unit will reinitialise.