7. Green & Red LED reference

The green and red LEDs are intended to troubleshoot installations. Below is a summary of their behavior.

7.1 Green LED

When the ignition is first turned on the GNX will powerup. The Green LED will show solid for approximately 30 seconds (there may be some brief flickers initially while the processor initializes). At no other time should the green LED remain on solid for such a long period.

After 30 seconds the green LED will start to flash at the following rates :

- 25 times on-off every 10 seconds when the ignition is on (this is quite rapid)

- 8 times on-off every 10 seconds when the ignition is off (this is quite slow)

- Very short blip once every 3 seconds when napping

The green LED will also show if there is a PTO active by flashing a number of times corresponding to the PTO (1,2,3,4). For example if PTO 4 is active then there will be 4 short flashes every 3 seconds.

7.2 Red LED

The RED LED flashes 2-digit codes. Roughly speaking the first digit tells you what general area is having a problem (hardware, modem, GPS, end-end service). The second digit gives specific error information. Since there can be more than one error condition the GNX rotates through the error codes (for example if GPS is tracking no satellites and the modem is not registered).

7.2.1 1 – X error codes : GNX specific errors

1-1 The GNX has an expired license key due to failure to resync. with the GenXMobile configuration server. Contact GenX with the serial number of the device.

1-2 Low supply voltage. This could be caused by a true low voltage condition (<8v) or a high impedance supply that dips in voltage when the current draw spikes due to modem transmit. This feature was introduced in 1.x.53 firmware.

1-3 Allocated data usage exhausted. Resync the unit to restore (see MAXDATAUSAGE)

7.2.2 2 – X error codes: Modem related error codes

2-1 Modem module fault. RMA unit to GenXMobile for failure analysis and repair.

2-2 No SIM inserted. Make sure SIM drawer contains SIM and is correctly seated in the socket. If it is then RMA unit to GenXMobile for failure analysis and repair.

2-3 No signal. Check that the cellular antenna is correctly attached. Try to substitute a known-good cellular antenna to see if the antenna may be broken. If this cures the problem then reinstall new antenna. If not then RMA unit to GenXMobile for failure analysis and repair.

2-4 Network not found. For GSM remove the SIM card and try in a known-good GNX. If that GNX displays the same problem then the SIM card or account may be the source of the problem. For CDMA check that the account is still active. If it is then RMA the unit and transfer the account to the new ESN.

2-5 Last data session failed. This means that an attempt to establish a data session (GPRS, CDMA1x) failed. This could be because of an account problem, an incorrect APN, username or password, or simply due to network loading, temporary network outage, or poor radio coverage. This failure will occasionally happen in a working unit, but if the problem is persistent then further investigation is required.

2-6 GPRS is not attached, or CDMA 1xRTT data is not available.

7.2.3 3 – X error codes: GPS related error codes

3-1 GPS module fault: RMA the GNX to GenXMobile for failure analysis.

3-2 GPS antenna fault: Try replacing the GPS antenna with a known good antenna. If the condition is not corrected (wait 2 minutes for the LED to update) then RMA to GenXMobile for failure analysis.

3-3 GPS not tracking any satellites. Check that the GPS antenna has a clear, unobstructed view of the sky, and has been operating for at least 5 minutes. Check that the GPS antenna is facing the correct way up. If the condition persists RMA to GenXMobile for failure analysis.

3-4 GPS no fix (<3 satellites). If antenna has only partial view of sky due to the position of the vehicle (under a cover, close proximity to a building) then try to move the vehicle to ensure that it will be able to make fixes when standing in the open. If the vehicle has a full view of the sky and the error condition persists then try to reposition the GPS antenna to get les obstructed view of the sky.

3-5 GPS has no time. The GPS receiver sets its internal clock from the satellite signals. If the GPS receiver has no time then it has never seen a single satellite since the GNX5/10 was last power cycled.

7.2.4   4 - X error codes : end-end application error codes

4-2 Data transfer failed. This could be a TFTP, FTP, SMTP file transfer or a data transfer via TCP or UDP socket. It could indicate a failure to resync with the GenX Mobile server, or a failure to upload position data to the customer server. If the condition persists then contact GenX with the serial number and the phone number or IP. Note that since mobile data communication is inherently unreliable this code can appear from time to time even on a perfectly healthy GNX, and is not necessarily indicative of a hardware, firmware, or installation problem.