

# Data\_Link 2000

## ***APPLICATION NOTE AN022***

### **GPRS SIGNAL LEVEL TEST**

Ensure the battery is charged before commencing a signal strength test.

The signal strength of the local cellular phone site(s) is determined by pressing the push button on the unit. The tester will respond by conducting a self test. This causes all the LEDs on the front panel to flash twice in unison, except for the first **Red Registration LED** which remains off.

This is followed by all the LEDs extinguishing, except for the last **Green LED** which stays on for a fraction of a second longer. This is now extinguished and the three **Yellow LEDs** and the first **Green LED** flash sequentially three times. The unit then displays the status of the local cellular site(s) as follows:

The first **Red LED** (furthest from the push button switch) is the network registration LED. This LED will glow whilst the unit is registering and then will flash once the tester registers on the network. The second **Red LED** will remain on to indicate that the tester is working and able to detect the presence of a cell site. The next 9 LED's are the signal strength indicator

These equate to the network signal strength as follows:

- LED 3 (Red) on = signal quality of 6 - 7**
- LED 4 (Red) on = signal quality of 8 - 9**
- LED 5 (Red) on = signal quality of 10 - 11**
- LED 6 (Yellow) on = signal quality of 12 - 13**
- LED 7 (Yellow) on = signal quality of 14 - 15**
- LED 8 (Yellow) on = signal quality of 16 - 17**
- LED 9 (Green) on = signal quality of 18 - 19**
- LED 10 (Green) on = signal quality of 20 - 21**
- LED 11 (Green) on = signal quality of 22+**

All LEDs will extinguish if signal strength is greater than 31 which is indicative of a problem with the cellular network. The press button is to power the unit on or off. Additionally the unit powers down automatically after approximately 5 minutes use to conserve the battery life. The socket on the front bezel of the tester is to allow the connection of a battery charger unit. This must be capable of providing 100 mA at 7 - 15 Volts DC. Once charged the battery will have a life of approximately 3 working days (constant use), or more than a working week based on 3 or 4 site visits per day.

