



# CDP197

## Mobile Phone Detector

With mobile phones getting ever smaller, they are increasingly being used in areas where they are forbidden. This technology is also becoming the preferred medium for bugs and other surveillance devices. To combat these problems, Esoteric has worked with a manufacturer to develop the multi-purpose CPD197 mobile phone detector.

Advanced band-selection filtering coupled to our unique signal-detection algorithms and easy-to-use displays gives unprecedented sensitivity and selectivity for this type of equipment.

The CPD197 can detect 2G (GSM900 & GSM1800) and 3G (UMTS900& UMTS 2100) plus 4G (LTE800 and LTE2600) mobile phones. For situations where greater accuracy is required and / or specific monitoring is required in areas containing multiple phones, a specially designed directional antenna system can be used with the 197.

The CPD197 keeps a record of all the alarms and compiles totals of each type of technology detected. This information can be displayed via its Statistic Display. This allows the user to see at a glance whether there are any trends to using new technology. In prisons for instance if the majority of the alarms are GSM, officers will be looking for the small GSM devices such as key fob phones. If the 3G totals are high then officers would be looking for much larger phones.



### Key Features

- > Detects both 2G, 3G & 4G mobile phones
- > LED bar-graph signal level indication
- > OLED display with automatic brightness control
- > Alarm logging- details time, frequency, signal strength up to maximum 4096 entries
- > Multiple range settings
- > Cadenced vibration alert for ease of use

### False Alarm Protection

The CPD197 incorporates several new features to protect against false alarm indications. The first is a special software filter to reject DECT signals. DECT phones work in a frequency band adjacent to the GSM1800 band and cannot be reject entirely by hardware filters. The second feature is PMR rejection. The CPD197 will reject a 3G alarm if a special PMR circuit detects energy in the 400-500Mhz band at the same time. This prevents radio transmissions from causing false alarms due to harmonic transmissions.

### Display

The large green OLED display provides the user with details such as Configuration, Alarm information, Display of past Alarms, Statistics etc. The four soft keys allow the user to move easily between the various functions. Display brightness is automatically controlled to match ambient lighting.





# Technical Specifications

## Frequency Bands

The CPD197 is specifically engineered to monitor handset transmit frequencies only and will scan the following simultaneously:

- EGSM900 (880 – 915MHz) & GSM1800 (1710 – 1785 MHz)
- UMTS 2100 (1920 – 1980 MHz) & UMTS900 (880-915MHz)
- LTE800 (824-849 MHz), LTE2600 (2500-2570 MHz) & LTE1800 (1710-1785)
- PMR lockout: 400-480MHz bands >-80dBm inhibits 3G detection to avoid false alarms
- DECT & TETRA rejection >-80dBm

## Detection Method

Pulse Envelope Demodulation with our unique Digital Signal Processing algorithms help to prevent false alarms while differentiating between strong, weak, and interfering signals. SAW filters help reject any interference from nearby base-stations.

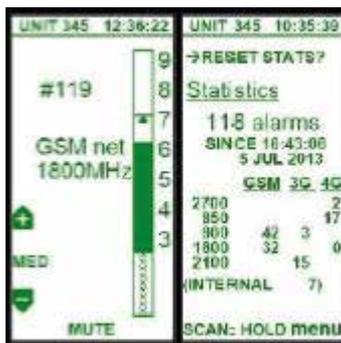
## Detection Thresholds

GSM: -75dBm typical (on max setting)  
UMTS/LTE: -98dBm typical

## Alarms

When in scanning mode the CPD197 display indicates the signal strength and type of phone technology being detected. The current alarm is automatically assigned a record number so details can be recovered at a later time. This feature allows the user to track down the signal source. All Alarm information is automatically added to the Statistics table which can be recalled when required.

This tables enable the user to see at a glance which technologies are being used i.e. 2G, 3G or 4G and in what numbers. Although the CPD197 can store over 4000 alarms individual totals in the statistics table cannot exceed 999.



Alarm Statistics

## Battery Life

Typically 100 hours, allowing for average use with the vibration feature on. With vibration feature turned off battery life can be extended by many 10's of hours. The Low battery LED indicates that the cells should be replaced. If "Flat Battery" is displayed – replace batteries immediately.

## Physical

Case: 125 x 65 x 30mm, excluding antennas. ABS to UL 94-HB; IP45.  
Weight: 170 grams (including batteries). Battery 2 x 'AA' cells

Specification subject to change without notice

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