CPD196
Mobile phone detector

- Detects both 2G & 3G mobile phones
- LED bargraph signal level indication
- Automatic display brightness control
- Advanced digital filtering for signal isolation
- PMR protection circuitry + DECT rejection filters
- Multiple range settings
- Cadenced vibration alert for ease of use

Product description

With GSM 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, PDA Electronics has developed the multi-purpose CPD196 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 CPD196 can detect both 2G (GSM900 & GSM1800) and 3G (WCDMA / UMTS 2100) 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 196.

Features

Sensitivity and detection ranges

You can set the CPD196's range and sensitivity to match the application. The High range allows entire cell blocks to be swept, while the Low range helps locate the target mobile more accurately.

❑ Indications

In the Handheld mode, the presence and strength of detected GSM phone signals are shown by the **Level** bargraph display. (The Level display is inhibited in the static mode.)
The **Type** indicators flash rapidly to show whether the currently detected signal is a Network, 2G or 3G call. Once the signal has ceased, these LEDs flash slowly until the control button is pressed.
Whenever the CPD196 is operating, either the High or Low Range LED will be lit. Use the control button to step between ranges.

❑ Using the CPD196

The **Handheld** mode allows the user to walk around checking for threats. There are two modes, V enables the cadenced vibrator and X causes the unit to function silently.
On the High range, detection range will as much as 300m (in free space, for GSM1800 mobiles on full power-1watt). The Low range is used to pinpoint a phone's location if a phone is transmitting on high power and the building materials allow easy passage of the signals to adjacent areas.

❑ False Alarm Protection

The CPD196 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 196 will reject a 3G alarm if a special PMR circuit detects energy in the 400-500Mhz band at the same time. This prevents prison radios from causing false alarms due to harmonic transmissions.

Specifications

Frequency bands

The CPD196 is specifically engineered to monitor handset transmit frequencies only

- **EGSM900 (880 – 915MHz) & GSM1800 (1710 – 1785 MHz)**
- **W-CDMA / UMTS 2100 (1920 – 1980 MHz)**

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.

LED indications

The 9-segment **Level** bargraph shows the approximate range to a signal's source. The segments are colour coded for ease of use in low light areas..

The **Type** LEDs allow the user to distinguish between **N**etwork, **2G** and **3G** calls, either current (fast flashing) or past (slow flashes). These are active in all modes. N + 2G indicates a 2G network signal detected whereas 2G on its own indicates a call. The same is applicable for 3G signals

The **Range** indicators show whether the unit is on, and whether the **High** or **Low** range setting is in use. These are active in all modes.

Control button

- While the unit is turned off, a single press will **turn it on**.

In **Handheld** mode, the entire Level display will now flash for a couple of seconds while the vibrator buzzes (if slide switch is set to position V).

- To change the **Range** setting at any time, press and hold the button down for at least a second. First the current Range LED will flash, then the other, and so on. Release the button to select the range which is being indicated. Repeat as required.
- If the **vibrator** is activate (side to V position), it can be temporarily silenced by a single press. The next alarm will automatically re-enable it.
- To **turn the unit off**, press and hold the switch. The CPD196 will cycle through its range-setting sequence; after two complete cycles, the device will switch off.

Vibrator switch: settings

A small slide switch on the side the case lets you select the operating mode. V is for vibrator mode – cadence vibrations are enabled whilst in the X position the vibrator is disabled

Battery life

Typically 100 hours, allowing for average use of the vibrator. With vibrator turned off battery life can be almost doubled .
The **Low battery** LED indicates that the cells should be replaced.

Physical

Case	105 x 58 x 18mm (length x width x depth), excluding belt clip. ABS to UL 94-HB; IP45.
Weight	80 grams (including batteries).
Battery	2 x 'AAA' cells – alkaline or rechargable NiMH.

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