



## Hytera presents: The world's first handheld DMR PMR446 radios

The innovative licence-free handheld digital mobile radios from Hytera were among the first in the world. They operate in 446MHz frequency range, and were developed in accordance with the open DMR standard. Their compact design and intuitive operation make these DMR radios the ideal companion for day-to-day business.



# Radios

## PMR446 DMR handheld radio



### The open DMR standard

Digital Mobile Radio (DMR) is an open standard for professional mobile radio (PMR), developed by the European Telecommunications Standards Institute (ETSI). DMR systems use a channel range of 12.5 kHz and are compatible with the frequency spectrum of analogue mobile radio. As a result, mobile radio solutions based on the DMR standard enable a simple and cost-efficient migration from analogue to digital technology.

The DMR standard currently differentiates between three graduations in terms of functionality and performance. Licence-free DMR radios from Hytera correspond to DMR Tier I. Products in accordance with DMR Tier I are used for simple radio communications in the 446-MHz band, with a maximum transmitting power of 0.5 watts (licence-free).

For users who require a higher scope of functionality, Hytera also offer both conventional and trunked digital mobile radio systems within our product portfolio.

### PMR446 – Licence-free radio for everyone

PMR446 radios can be operated by any user, with no need for proof of identification or a radio licence. The UHF frequency range from 446.0 to 446.2 MHz is assigned to these licence-free radios, whereas the range from 446.0 to 446.2 MHz is reserved for analogue and digital applications respectively.

'PMR' refers to Private Mobile Radio. PMR446 radios feature a permanent antenna with maximum transmitting power of 0.5 Watts.

Our digital PMR446 radios combine the properties of citizens' band radio with the new digital mobile radio standard. With this unique combination, you receive licence-free radios that also offer the extensive functionality of professional digital mobile radio, straight out of the box.





## Advantages of the Digital PMR446

### Higher sound quality

DMR technology supports various methods to manage channel noise, ensuring a higher voice quality than conventional analogue radio. This applies particularly to the outside edges of the coverage area.

### More available channels

In contrast to conventional analogue radio devices, our digital radios offer 16 analogue channels, as well as 16 digital channels.

### Longer battery life

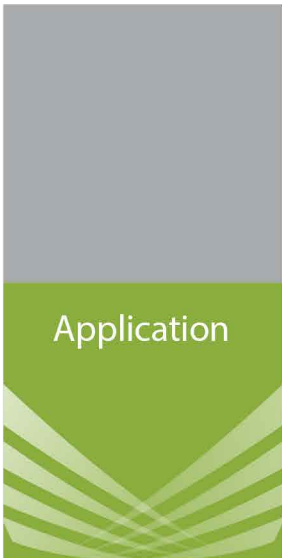
Thanks to the TDMA process used, our radios achieve a battery life in digital mode that can last up to 40% longer than a traditional analogue radio.

### Licence-free DMR radio

Our licence-free DMR radios are the first of their kind on the market. This means they can be used without an operating licence, but aren't limited on features. On top of this, our PMR446 radios feature state-of-the-art digital radio technology.

### Analogue and digital capabilities

All of our DMR products support analogue signals as well as digital. This allows users to communicate with pre-existing analogue radio signals and devices, as well as other DMR products.



## Possible applications of the PMR446

### PD355LF & PD365LF

The PD355LF and PD365LF handheld radios are both compact and practical, weighing just 160g each. Possible applications for these such products include:

- Catering
- Retail
- Hospitality
- Leisure activities such as rock-climbing and mountaineering

### PD505LF

The robust and rugged design of the PD505LF from Hytera makes this device the perfect companion for professionals and radio enthusiasts alike. Possible applications for the PD505LF include:

- Construction
- Agriculture
- Facility management
- Leisure activities such as rock-climbing and mountaineering

# Radios

## PD355LF & PD365LF

DMR handheld radios



### Highlights

#### Attractive and lightweight

Their stylish and compact design and the intuitive operation render the PD355LF and PD365LF vital companions in everyday communication. With a weight of approx. 160g for each model, both can be carried comfortably, and even fit easily inside your pocket.

#### Supports analogue and digital

Both models have been developed in compliance with the ETSI Digital Mobile Radio (DMR) standard. Supporting licence-free operation according to DMR Tier I, but also operating equally as well with analogue technologies and signals, to ensure a seamless migration from analogue to digital.

#### 32 pre-programmed channels

Thanks to the implemented digital technology, both radios offer 32 pre-programmed channels. Of these channels, 16 are analogue and 16 digital, divided into three zones.

#### Integrated antenna

The unique integrated antenna design on both models enables excellent signal and availability, without the fuss and bulk of a large antenna.

#### Small investment - quick start

Not only do the licence-free DMR devices offer numerous fantastic features, but also a quick, uncomplicated start into digital radio life, at a fair price.

#### Longer battery life

In digital mode, the supplied lithium-ion battery (2000 mAh) provides both mobile radios with an operating time of at least 12 hours, given an operating cycle of 5-5-90 (5 percent talk/send, 5 percent receive and 90 percent standby).

#### Additional Functions

- Dual mode: Switching between digital and analogue is possible
- Versatile voice calls: Individual call, group call, and broadcast call on digital channels
- Dust and water protection according to IP54
- Shock and vibration resistance according to MIL-STD-810 C/D/E/F/G
- DMR text messages with up to 64 characters
- Four programmable keys
- Charging and programming via Micro-USB interface
- Scan function for analogue as well as digital channels



Micro USB port for battery charging

Integrated antenna design



PD365LF

PD355LF

Long battery life

Compact, lightweight design

**In the box**

**Optional accessories**



Lithium-ion battery (2000 mAh) BL2009



Switching power adapter for charger PS1044



Universal Switching Power Adapter (Micro USB)



Programming cable (USB) PC69



Earphone with C-clip EHS16



Wireless charging kit POA113



Hand strap RO01



Belt clip BC20/BC21

# Radios

## PD505LF DMR handheld radio



### Highlights

#### Supports digital and analogue

The PD505LF was developed in compliance with the ETSI Digital Mobile Radio (DMR) standard. The handheld radio supports licence-free operation according to DMR Tier I. It can also be operated as an analogue radio.

#### Secure communication

Thanks to Hytera 40 bit basic encryption, communication between colleagues is always reliable and secure.

#### Accessories for every operation

Like all Hytera handheld radios, an extensive portfolio of accessories is available for the PD505LF. Whether that be multiple-handset chargers, cases, headsets or speaker-microphones, the PD505LF can adapt itself to any and all operating requirements.

#### Ergonomic design

The PD505LF handheld radio is easy to operate and highly reliable, which can be indispensable in critical situations.

#### Individual button design

The PD505LF's design prevents operating errors, through the use of separating the two rotary buttons with the antenna.

#### Reliability

The PD505LF meets all requirements of the open DMR ETSI standard (ETSI-TS 102 361-1, -2, -3), the MIL810-C/D/E/F/G standard and degree of protection IP54. Thus, excellent features are maintained, even under harsh operating conditions.

#### Additional Functions

- Dust and water protection according to IP54
- Shock and vibration resistance according to MIL-STD-810 C/D/E/F/G
- Versatile voice calls: Individual call, group call, and broadcast call on digital channels
- Analogue signaling: 5-tone, 2-tone, HDC1200, CTCSS, CDCSS for analogue channels
- Squelch in analogue operation
- Scan function for analogue as well as digital channels
- Although the PD505LF has no display, it supports text messages: up to 25 pre-programmed text messages can be saved.
- TDMA direct mode for DMR
- Hytera basic encryption with 40 bit
- DMRA data service
- VOX





PD505LF

Ergonomic and lightweight chassis

Battery life of up to 16 hours (1500 mAh)

**In the box**

**Optional accessories**



Lithium-Ion Battery (1500mAh) BL1504



MCU Rapid-Rate Charger CH10A07



Switching power adapter for charger PS1044



Vehicle power adapter for charger CHV09



Speaker microphone SM26M1



Earphone ESM12



Hand strap RO03



Belt clip BC08



Lithium-ion battery (2000 mAh) BL2010



6-unit charger MCA08



Carrying case (nylon) NCN011

## Technical Data

PD355LF & PD365LF	
Frequency range	UHF: 446,0 – 446,2 MHz
Supported operating modes	<ul style="list-style-type: none"> <li>• DMR Tier I (license-free DMR)</li> <li>• PMR446 analogue mobile radio</li> <li>• DMR Tier I in acc. with ETSI TS 102 361-1/2/3</li> </ul>
Channel capacity	32
Zone capacity	16 (in condition as supplied to the customer 3 zones with 32 channels preconfigured)
Channel spacing	12.5 kHz (analogue, digital)
Battery life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 12 hours (digital)
Standard battery	2000mAh (lithium-ion battery)
Transmitting power	0.5 W
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Digital vocoder type	AMBE +2™
Operating voltage	3.7 V
Dust and water protection	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
Dimensions (H × B × T)	123 × 58 × 23 mm (PD355) 135 × 58 × 24 mm (PD365)
Weight	approx. 160 g

PD505LF	
Frequency range	UHF: 446,0 – 446,2 MHz
Supported operating modes	<ul style="list-style-type: none"> <li>• DMR Tier I (license-free DMR)</li> <li>• PMR446 analogue mobile radio</li> <li>• DMR Tier I in acc. with ETSI TS 102 361-1/2/3</li> </ul>
Channel capacity	32
Zone capacity	3
Channel spacing	12.5 kHz (analogue, digital)
Battery life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 16 hours (digital)
Standard battery	1500mAh (lithium-ion battery)
Transmitting power	0.5 W
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Digital vocoder type	AMBE +2™
Operating voltage	7.4 V
Dust and water protection	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
Dimensions (H × B × T) (without antenna)	115 × 54 × 27 mm
Weight	approx. 260 g

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