



MD785 / MD785G

DMR mobile radios

The DMR mobile radios MD785 and MD785G offer versatile digital functions that allow you information exchange in all types of situations. With its ergonomic design, its easy to operate user interface and its remarkable quality, it is the ideal solution for your communication requirements; whether it involves optimising the efficiency of your company or to be able to respond to emergency situations at all times.



Radio

MD785 MD785G

DMR mobile radios



Highlights

Excellent voice transmission

Thanks to the simultaneous application of narrow band codecs and digital error correction, the MD785/MD785G offers you an outstanding audio quality in loud environments and in boundary regions of the radio coverage.

Dual mode

The MD785/MD785G features an analogue as well as a digital mode and is compatible with the currently used analogue systems, thereby simplifying your transition into the digital age.

Improved use of the radio spectrum

Thanks to the TDMA process the MD785/MD785G allows an assignment of the available bandwidth with double channel capacity. This results in a clear relief of the increasing spectrum scarcity.

Secure communications

Besides the built-in encryption based on digital technology, the MD785/MD785G features advanced encryption options, e.g. 256-bit encryption and a scrambler function (optional).

Reliability and quality

The MD785/MD785G complies with the standards MIL-STD-810 C/D/E/F and the degree of protection IP54 and offers a high degree of reliability even in rough environments.

Versatile functionality

Besides the classic communication functions, the MD785/MD785G features numerous additional digital and optional functions, including text messages, GPS location determination* and a lone worker function.

Expansion port

Thanks to the built-in expansion port, the MD785/MD785G can be expanded by additional functions.

Intuitive interface and key guidance

The high-resolution LCD screen offers a clear display, even under difficult light conditions. The large keyboard and ergonomic programmable keys allow an efficient and productive communication.



Functions (excerpt)

Versatile voice communication

Thanks to digital signal transmission, the MD785/MD785G allows you different types of voice communication, including individual calls, group calls and simultaneous communication with all subscribers.

Data services

The MD785/MD785G offers you data services, such as sending text and group messages.

GPS (MD785G)

The MD785G supports GPS location determination and sending GPS location data as text message.

Roaming

The MD785/MD785G allows automatic cell re-selection (Roaming) at all sites in multi-site systems.

Supplementary services

With the MD785/MD785G, you can utilise various services, such as Radio Check, Remote Monitor and Call Alert.

Various analogue signalling types

With the MD785/MD785G, you can also use, for example, selective calls, HDC1200 and CTCSS/CDCSS.

Different menu languages

Incl. German, English, French, Spanish, Polish, Italian, Russian, Turkish, simplified and traditional Chinese, Korean.

Emergency call

MD785/MD785G offers you several emergency call options, such as the concealed emergency call.

Powerful loudspeaker

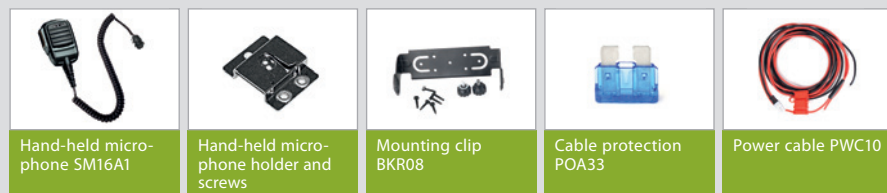
For a clear audio output, the MD785/MD785G features a powerful 5-watt loudspeaker.

Expandable software

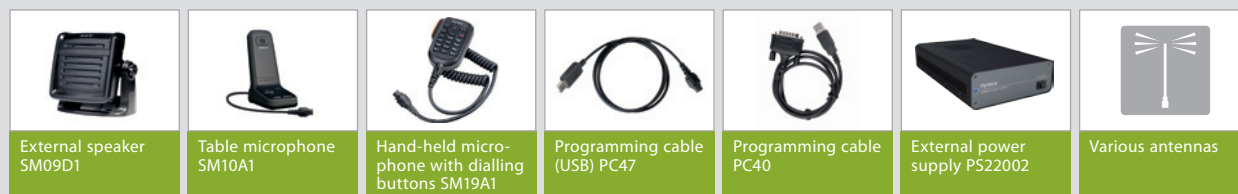
You can configure additional functions and install new firmware versions without having to purchase a new radio transceiver.



Standard accessories



Optional accessories (excerpt)



The illustrations shown above are only for reference purposes. The products themselves may vary from these representations.

Technical data

| General data | |
|----------------------------------------|-----------------------------------------------------------------------------------------|
| Frequency ranges | UHF1: 400 – 470 MHz UHF2: 450 – 520 MHz UHF3: 350 – 400 MHz VHF: 136 – 174 MHz |
| Channel capacity | 1024 |
| Number of zones | 64 (each with max. 16 channels) |
| Channel spacing | 12.5/20/25 kHz |
| Operating voltage | 13.6V ± 15% |
| Power consumption (standby) | < 0.6A |
| Power consumption (reception) | < 2.0A |
| Power consumption (transmission, max.) | 5 W: < 5 A, 25 W: < 8 A 45 W/50 W: < 12 A |
| Frequency stability | ± 0,5 ppm |
| Antenna impedance | 50 Ω |
| Dimensions (H×W×D) | 60 mm × 174 mm × 200 mm |
| Weight | 1.7 kg |
| Military standard (USA) | MIL-STD-810 C/D/E/F/G |
| LCD monitor | 220 × 176 pixel, 262.000 colours, 2.0 inch, 4 lines |

| Receiver | |
|--------------------------------------------------------|----------------------------------------------------------------------------------|
| Sensitivity (analogue) | 0.3 μV (12 dB SINAD) 0.22 μV (standard) (12 dB SINAD) 0.4 μV (20 dB SINAD) |
| Sensitivity (digital) | 0.3 μV / BER 5 % |
| Adjacent channel selectivity TIA-603 ETSI | 65 dB at 12.5 kHz/75 dB at 20/25 kHz 60 dB at 12,5 kHz/70 dB at 20/25kHz |
| Intermodulation TIA-603 ETSI | 75 dB at 12.5/20/25 kHz 70 dB at 12.5/20/25 kHz |
| Spurious response rejection TIA-603 ETSI | 75 dB at 12.5 / 20 / 25 kHz 70 dB at 12.5 / 20 / 25 kHz |
| Hum and noise | 40 dB at 12,5 kHz, 43 dB at 20 kHz, 45 dB at 25 kHz |
| Radio audio output | Internal 3W at 20Ω, external 7.5W at 8Ω |
| max. audio power output | Internal 8W at 20Ω, external 20W at 8Ω |
| Nominal audio distortion at rated audio output | ≤ 3 % |
| Audio response | + 1 to -3 dB |
| Conducted spurious emission | < -57 dBm |

| Transmitter | |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF transmitting power | Low output: UHF1 (400 – 470 MHz): 5 – 25 W UHF2 (450 – 520 MHz): 5 – 25 W UHF3 (350 – 400 MHz): 5 – 25 W VHF (136 – 174 MHz): 5 – 25 W High output: UHF1 (400 – 470 MHz): 5 – 45 W UHF2 (450 – 520 MHz): 5 – 45 W UHF3 (350 – 400 MHz): 5 – 45 W VHF (136 – 174 MHz): 5 – 50 W |
| Frequency modulation | 11 KΦF3E at 12.5 kHz 14 KΦF3E at 20 kHz 16 KΦF3E at 25 kHz |
| 4FSK digital modulation | 12.5 kHz (data only): 7K6ΦFXD 12.5 kHz (data and voice): 7K6ΦFXW |
| Interfering signals and harmonics | -36 dBm < 1 GHz, -30 dBm > 1 GHz |
| Modulation push | ± 2.5 kHz at 12.5 kHz ± 4.0 kHz at 20 kHz ± 5.0 kHz at 25 kHz |
| FM hum and noise | -40 dB at 12.5 kHz, -43 dB at 20 kHz -45 dB at 25 kHz |
| Adjacent channel selectivity | 60 dB at 12,5 kHz, 70 dB at 20/25 KHz |
| Audio response | + 1 to -3 dB |
| Audio distortion | ≤ 3 % |
| Digital vocoder | AMBE ++ / SELP |
| Digital protocol | ETSI-TS102 361-1, -2, -3 |

| Ambient data | |
|--------------------------------------|----------------------------------------------|
| Operating temperature range | - 30 °C to + 60 °C |
| Storage temperature range | - 40 °C to + 85 °C |
| Protection against dust and moisture | Degree of protection IP54 |
| Shock and vibration resistance | According to MIL-STD-810 C/D/E/F/G standards |
| Relative humidity | According to MIL-STD-810 C/D/E/F/G standards |

| GPS (MD785G) | |
|----------------------------------------|--------------|
| Time to first fix (TTFF) cold start-up | < 1 minute |
| Time to first fix (TTFF) warm start | < 10 seconds |
| Horizontal precision | < 10 meters |

All technical indications were tested according to the corresponding standards. Subject to change on the basis of continuous development.

Your Hytera partner:



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Encryption features are optional and require a separate configuration, subject to German and European export regulations.

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