



MOTOROLA

TETRA
All together easier

TETRA - Revolutionising the way the world communicates

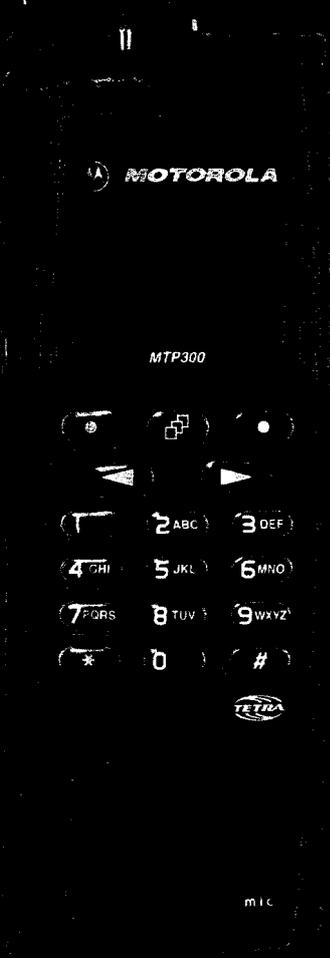


MTP300

Motorola TETRA Handportable Radio

Packed with, state of the art functionality that includes many future proof features, the MTP300 TETRA compliant radio really is tomorrow's portable communications solution, today. Offering, as part of its high operational specification, integrated despatch functionality as well as, mobile phone like capabilities, the MTP300 is probably the market's leading unit for the public safety user. And it's as practical, tough, reliable and as easy to use as you've come to demand from Motorola.

- **Widely acclaimed, internationally proven** : the MTP300 has earned accolades from users and industry experts around the world.
- **Top performance, for longer** : with long battery life, high quality audio it is designed and manufactured to demanding environmental specifications, the MTP300 is built to last.
- **Highly personal styling** : home key, soft key driven, ergonomically designed controls, and built in speaker with separate ear piece all make the MTP300 a pleasure to carry and use.
- **Going beyond the expected** : leading edge features include frequency efficient DMO, encryption and packet data connectivity.
- **A wide range of standard and updatable features** : all the easy to use functions you need now, and in the future, as your usage evolves.
- **Voice, data and text services supported** : offering ever more effective ways for you to communicate.





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Motorola TETRA Handportable Radio 380-400 MHz 410-430 MHz

PMR Voice Services Supported:

- Group Call
- Individual Call
- Emergency Call
- 4 Language support (English, German, French and Spanish)
- Short number Dialling
- Priority monitor
- Talk group scan
- Announcement talk group
- Normal Direct Mode Operation (DMO)
- Late Entry
- Duplex Telephone Interconnect with DTMF overdial
- Local Site Trunking
- Air Encryption TEA 1 and TEA 2

Non-Voice Services Supported:

- Short Data Service (SDS)
- Packet Data Service (PDS)
- Status Messaging
- RS232 Data Peripheral Equipment Interface
- Alphanumeric Text Service

General:

Dimensions HxWxD	mm	167 x 57 x 37 (with Li Ion)		
Weight	g	378 (without battery) 693 (with NiCad battery) 644 (with NiMH battery) 559 (with Li Ion battery)		
Battery Capacity		NiCad	NiMH	Li Ion
Operating life TX/Rx/Stby (5/20/75)		14.5 Hours	14.5 Hours	14 Hours
Talk Groups		255		
DMO Channels		100		
Individual call list		50		
Phone call list		50		

Environmental:

Operating Temperature		-20 to +60°C
Storage Temperature		-40 to +85°C
Humidity		EIA/TIA 603 (95%)
Dust and water		IP 54
Shock and vibration		MIL 810 D+E

RF Specifications:

Direct Mode Frequency Band	MHz	380-400, 410-430
RF Channel Bandwidth	kHz	25
Switching Bandwidth (TMO)	MHz	5
Transmitter/Receiver Separation	MHz	10
Transmitted RF Power	Watt	1
RF Power Control		4 steps of 5dB
RF Power Level Accuracy		-1.5dB, +2dB
Receiver Class		B
Receiver Static Sensitivity	dBm	-112
Receiver Dynamic Sensitivity	dBm	-103

All specifications use the ETS 300-394 & iETS300-13 method for measurement. All values subject to change without notice.

Important Note:

The features and facilities described in this brochure should be used for indicative purposes only. Availability of features and facilities will be dependent on Motorola's scheduled product development programme.

Accessories include:

- NICO battery
- NiMH battery FM
- Lithium ion battery
- Remote speaker mic
- Public safety mic
- Single unit charger
- Six position unit charger
- Earpiece standard
- Earpiece extra loud
- Surveillance earpiece mic plus PTT
- Surveillance earpiece plus mic with separate PTT
- Boom mic headset
- Variety of carrying accessories
- Data adapter cable
- Vehicle adapter



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NOKIA

700 MHz Public Safety Band Key Considerations

I. **Nationwide Interoperability Standardization and General Use Channel Efficiency Standards are Inextricably Intertwined.**

- **The Commission can achieve nationwide interoperability and achieve 6.25 kHz voice channel efficiency** by (a) adopting Project 25 Phase I ("Phase I") for the interoperability channels and (b) mandating 6.25 kHz efficiency on the general use channels.
- **Manufacturers need to know both the general use efficiency requirements and the interoperability standard** when defining product development plans. By deciding these issues together, the Commission will define the critical technical parameters that manufacturers require to rapidly introduce equipment for the 700 MHz band.

II. **The Commission Should Mandate 6.25 kHz Efficiency on the General Use Channels.**

- **Unless the Commission mandates 6.25 kHz efficiency on the general use channels, it will be far more difficult to migrate to 6.25 kHz technology in the future.** There is no easy and low-cost solution for migrating from 12.5 kHz to 6.25 kHz at the system level. The costs involved in such a transition are significant and would create a serious barrier to migrating to 6.25 kHz technology for most public safety agencies.
- **Mandating 6.25 kHz efficiency in the general use channels will not delay the introduction of equipment in the 700 MHz band.** The 700 MHz band is new in the U.S., and not allocated for any mobile radio use anywhere else in the world. Today, no manufacturers produce 700 MHz public safety equipment. All manufacturers will need time to modify their base station and terminal offerings to operate in the 700 MHz band.
- **Multiple technologies are suitable for public safety use which achieve 6.25 kHz channel efficiency.** Competing 6.25 kHz technologies include 2-slot TDMA, 4-slot TDMA, and 6.25 kHz FDMA. Even more efficient technologies are becoming available such as DCMA, which has been demonstrated by Comspace and achieves 3.125 kHz voice channel efficiency.
- **6.25 kHz equipment is used by public safety agencies in many other countries and is meeting these users' technical and operational requirements.** This same equipment could readily meet the needs of public safety users in the U.S. in all operating environments: urban, suburban and rural. In addition, 6.25 kHz handheld units that provide battery life of 12-14 hours in normal public safety duty cycles already are in use.

III. A Reasonable Transition Period Before Phase I Becomes Mandatory is Essential and Will Not Delay Interoperability.

- **Manufacturers will need time to modify their base station and terminal offerings to operate in the 700 MHz band.** In addition, manufacturers of equipment designed to operate at 6.25 kHz efficiency in the general use channels will need a reasonable transition period in which to integrate Phase I functionality into their products.
- **Interoperability in the 700 MHz band will only be necessary after incumbent TV operators vacate the band and two systems with different technology are deployed in the same geographic region.** Given the years needed to plan and implement public safety radio systems and the fact that the DTV transition will not be complete until 2006 at the earliest (and 2010 more likely), it is unlikely that any two such systems will be deployed in less than six to nine years. Accordingly, granting a reasonable transition period before Phase I capability is mandatory will not delay the availability of interoperability, and will accelerate the availability of spectrally efficient equipment for general use.

IV. There is a critical need to ensure competition in the 700 MHz equipment market.

- **By mandating 6.25 kHz on the general use channels the Commission will ensure a vibrant competitive equipment market for the 700 MHz band.** There are multiple competing 6.25 kHz technologies suitable for general use. While there is only one supplier of Phase I 12.5 kHz trunked infrastructure equipment, and there is no promise that any other supplier will emerge in the future. Allowing Phase I to dominate the 700 MHz band will perpetuate a monopolistic environment, denying public safety agencies the improved services and cost savings that a competitive environment will foster.