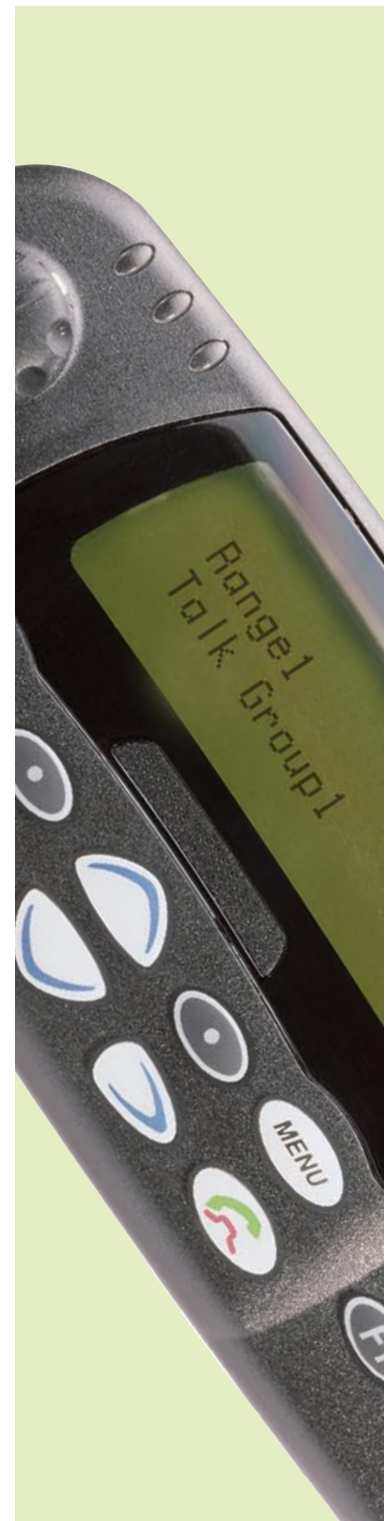


MTM 800

TETRA Mobile Terminal



SEAMLESS ACCESS TO VOICE AND DATA WHEN AND WHERE IT'S NEEDED MOST

The MTM 800 is Motorola's latest TETRA mobile terminal and is part of the new platform for mission critical mobile voice and data communication. By delivering fully integrated voice and data services it ensures users have access to up to date intelligence, enabling them to make truly informed decisions.





DURABILITY & ROBUSTNESS

The MTM 800 is certified with extremely rigorous Accelerated Life Testing which guarantees reliability, durability and extreme robustness. It is built to meet IP54 standards and IP57 for the motorcycle version and withstands the continuous exposure to most difficult environments where users from public safety, transport and industry operate.

AUDIO QUALITY

The MTM 800 TETRA mobile solution has been designed to operate in the most critical environments where communication and timing are vital. Special audio filters allow clear quality even in extreme and noisy environments.

EASY TO USE

- Large, clear graphical display
- Three programmable keys – allowing direct access to most critical features
- One touch feature on the numeric keys to simplify menu access
- Favourite Talkgroups, to customize radios to each user's need.
- Dedicated emergency button
- Customized operation thanks to a large range of accessories

VERSATILE AND ADAPTABLE

Five different variations of the MTM 800 are available to suit specific operational needs: the dashboard mount, remote mount, desktop mount, and motorcycle and data box.

HIGH PERFORMANCE DATA MULTI SLOT PACKET DATA

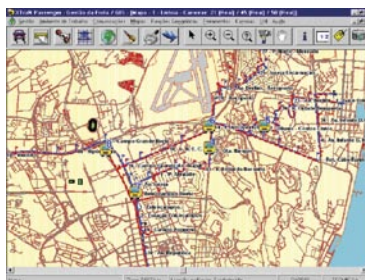
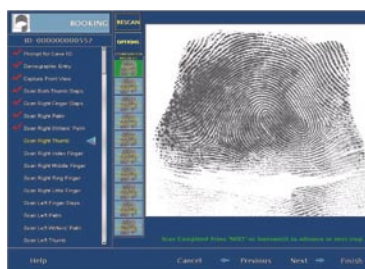
Short Data Service and Packet Data on the PEI interface provide the right connectivity for data applications. Furthermore MTM 800 offers Multi Slot Packet Data, enabling data rates up to four times that of first generation TETRA terminals. Users can transfer maps, pictures and access databases in a few seconds.

GPS LOCATION SERVICES

Enhance the user safety and efficiency with an optional integrated high sensitivity GPS receiver which enables customised automatic vehicle location services and resource management. MTM 800 also supports remote control of the various GPS parameters over the air – minimising the need to recall vehicles for reprogramming. MTM 800 provides true interoperability with the ETSI Location Information Protocol (LIP).

END-TO-END ENCRYPTION

The fully integrated End-to-End encryption (E2E) technology satisfies the security needs of the most demanding users. As part of a complete E2E solution from Motorola the MTM 800 offers support for multiple encryption algorithms and Over-the-Air-Keying using Motorola's Advanced Key Management Facility. The E2E module can be factory fitted, provisioned in-country or even retrofitted in the future to meet evolving user requirements.



Access to the right information to make
the right decisions

FEATURES

VOICE SERVICES SUPPORTED – GROUP:

- Group call – TMO/DMO
 - Late Entry
 - Group call via DMO Gateway
 - TMO / DMO Talkgroup mapping
 - Talk Group INDEX entry dialing via Keypad
 - Hidden Talkgroups
- Direct Mode (DMO)
 - DMO Gateway compatibility
 - DMO Repeater compatibility
- Announcement Talk Group call
- Smart Emergency call - TMO / DMO (including “Hot Mic” option in TMO)
 - to selected group, pre-defined group, including Emergency Status Message
 - to individual or telephone/PABX subscriber
- Dynamic Group Number Assignment (DGNA) - (up to 2047 Groups)
 - Accept DGNA assignment with attachment
- Local site trunking
- Scanning
 - Background Scanning (Always Scan)
 - Scan group attachment signaling
 - Scan on/off status
 - Support SwMI initiated attachment/detachment
- Talking Party Identification
- Priority Monitor
- Site Wide Call

VOICE SERVICES SUPPORTED –PRIVATE CALL:

- Half duplex/full duplex operation
- Flexible dialling (list scroll, short number dial, direct entry, alphabetic search, last number called)
- Loud/discreet audio mode (via optional handset)
- Calling line Identification Presentation
- Busy User Pre-emption (Pre-emption Priority Call – PPC)

VOICE SERVICES SUPPORTED – TELEPHONE CALL (PABX/PSTN):

- Full duplex operation
- Hands free operation
- Flexible dialling (list scroll, direct dial, alphabetic search, speed dial, one-touch dial, last number redial)
- DTMF over dial
- Calling line Identification Presentation
- Busy User Pre-emption (Pre-emption Priority Call – PPC)

SECURITY SERVICES SUPPORTED:

- Air Interface Encryption:
 - Algorithms
 - TEA1, TEA2, TEA3
- Security Class
 - Class 1: Clear
 - Class 2: Static Cipher Key (SCK)
 - Class 3: Derived Cipher Key (DCK) and Common Cipher Key (CCK)
- Authentication
 - Infrastructure Initiated
 - Made mutual by Terminal
- Secure Key Provisioning Tool for customer use
- User crypto key deletion from keypad
- Radio Stun
- PIN/PUK code access
- Packet data user authentication

END TO END SECURITY SERVICES SUPPORTED:

- END TO END encryption module with full tamper protection
- Factory or field install (including in-country) of END TO END module
- Multiple Algorithm support
- Over The Air Keying (OTAK) of encryption keys and Talkgroup associations

USER SAFETY:

- Dedicated Emergency button
- Keypad lock
- Transmit Inhibit (TXI) – enhanced version
- ‘Hot’ Microphone emergency (TMO)
- Automatic Microphone Gain adjustment during ‘Hot’ microphone emergency
- Emergency initiated by external switch (even when the terminal is off)
- Ambience Listening
- Site Wide Call





DATA/MESSAGING SERVICES SUPPORTED:

- Short Data Service (SDS)
- Alphanumeric Text Service (ATS)
- Built-in database enquiry templates
- One-touch status messaging
- Keypad entry of status values
- Peripheral Equipment Interface (PEI) for external RS232 short and packet data services
- New text message notification during calls
- Automatic status message sent on entering/exiting Transmit Inhibit mode
- Single and Multi Slot Packet Data
- TNP1
- WAP Support using Packet Data Services via PEI

USER INTERFACE FEATURES:

- Alphanumeric Talk Group search
- Loud/discreet audio mode toggle
- Keypad tones on/off
- Alert tones on/off
- Configurable Notification tones
- Backlight options (disabled, manual, automatic and semi-automatic)
- Scan list edit via keypad

- Address book edit via keypad
- Pre-programmed languages (English, French, German, Spanish, Dutch, Cyrillic and Swedish)
- User definable display languages (ISO 8859-1 characters)
- 2 dedicated context sensitive menu softkeys
- 3 dedicated programmable function buttons
- One-touch functions on numeric keypad (10 entries)
- One-touch Phone / Private / PABX / Status / Talk Group / TXI / Database template / Text message template
- Full access to menu system during calls
- Call history missed/received
- Backlight intensity manually adjusted via front panel

GPS LOCATION SERVICE:

- Fully integrated single chip GPS receiver
 - Low current and high sensitivity GPS
 - Autonomous and assisted GPS support
 - Multiple GPS protocol Support;
 - Location Request/Response (LRRP)
 - ETSI Location Information Protocol (LIP)
 - Combined GPS / TETRA or GPS only mobile antenna
 - GPS disable option for special operations
 - Authentication of GPS Location Service dispatchers
- Full programmable position update triggers including:
 - On request
 - Delta distance
 - Emergency Alerting
 - Delta time
 - On power-up/power down
 - TXi enable/disable
 - DMO/TMO switching
 - Full over the air programmability of all GPS Location Service parameters

OTHER:

- Multiple software upgrade capability
- Programming software automatic logging of logistical information
- Customer Programming Software Codeplug Password enable
- Enhanced Mobility operation (including subscriber classes)
- Favourite Talk Group (DMO/TMO Talk Groups)

ENHANCE YOUR MTM 800 MOTOROLA TETRA MOBILE TERMINAL WITH A WIDE RANGE OF ACCESSORIES

Professional users of mobile radios have specific needs, requirements and working conditions within a highly demanding environment. Motorola provides complete two-way radio communication solutions with a wide selection of microphones, speakers, in-vehicle accessory kits and remote mounting kits. Professional users can customise their MTM 800 mobile terminal to satisfy their individual communications needs above and beyond those already incorporated in the standard package.



SPEAKERS

Suitable for Desktop and In-Vehicle Solutions

GMSN4066	External speaker 13 watts
GMSN4078	Compact external speaker 5 watts



DESKTOP SOLUTION

Offers a simple and easy-to-install "mobile-in-tray" option suitable for local dispatching operations. The following accessories are required:

Audio accessories

GMMN4064	Desktop microphone
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Mounting option

GLN7318	Desktop Tray without speaker
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Power supply

GPN6145	Desktop power supply
GKN6266	DC power cable

Plug options

NTN7373	US Plug
NTN7374	Euro Plug
NTN7375	UK Plug

IN-VEHICLE SOLUTIONS

The following accessories allow mobile terminal customisation over and above the standard mounting option. Suits professional end users' needs and caters for different vehicles and dashboards. The following accessories are available.

Audio accessories

- GMUN1006** Telephone style handset kit
Ergonomically designed for professionals seeking the increased privacy of a slim line telephone style handset with PTT. Supports both Duplex and PTT calling. Includes two programmable buttons for added functionalities such as loudspeaker enable/disable and "request to send".
- GMMN4063** Fist microphone Provides remote microphone and PTT for convenient one-handed mobile terminal operation. Robust construction with coiled cord for strain relief.
- GMMN4065** Directional Visor microphone
Slick new design, catering for professionals working in vehicles for extended periods of time. Particularly suited for installations with high background noise and where the visor microphone is sheltered from outside wind.

Push-to-talk options (for remote ptt operation):

- RLN4857** Push button PTT
- RLN4858** Gooseneck PTT
- RLN4836** Emergency footswitch PTT

MOUNTING OPTIONS:

- GLN7317** High profile mounting trunnion
- GLN7324** Low profile mounting trunnion
- PMLN4492** 3 metre remote mount kit
- PMLN4493** 5 metre remote mount kit
- PMLN4494** 7 metre remote mount kit
- PMLN4495** 3 metre remote mount expansion kits
- PMLN4496** 5 metre remote mount expansion kits
- PMLN4497** 7 metre remote mount expansion kits
- RKN4077** 3 metre Remote Mount Cable

- RKN4078** 5 metre Remote Mount Cable
- RKN4079** 7 metre Remote Mount Cable
- RLN4779** Key lock mount

Power cables:

- GKN6270** 3 metre 12V power cable to battery with fuse (10A)
- GKN6274** 6 metre 12V power cable to battery with fuse (10A)
- HKN9327** 6 metre ignition sense cable with fuse (3A)

Antennas:

Large range of antennas including :

- GMAE4248A** Combined GPS/TETRA antenna
380-430 MHz
Note : also available in 450-470 MHz and 806-870 MHz
- GMAG4251** GPS only panel mount antenna
- GMAG4252** GPS only MAG mount antenna

Miscellaneous specialised accessories:

- GKN6270** External alarm relay
- GLN7282** Buzzer kit

Data:

- GMKN4079** Mobile SB9600 cable
- GMKN1022** Active Data Cable (for short and packet data transfer)
- GMKN4067** Programming cable



JUNCTION BOX

Compact and easy to install box which provides connections of all mobile accessories to the terminal (except the antenna). Data capability is allowed through the junction box RS232 port for dash/desk model only (for other models this is allowed through the expansion head RS232 port).

- GMLN3002** Junction Box (including installation kit)
- GMKN4192** 6 metre cable to junction box
- GMKN4194** 2 metre cable to junction box
- GMKN4193** 4 metre cable to junction box

SPECIFICATIONS

General

Dimensions HxWxD mm	49x170x155 (radio only) 72x185x53 (standard control head) 58x185x58 (Motorcycle control head)
Weight g 1370 (radio only)	1670 (radio with control head) 448 (Motorcycle control head only)
Talkgroups –TMO	2048
Talkgroups –DMO	1024
Phone book entries	225
Text message list	20
Status list	100
Country code/Network code list	100
Scan List	20 lists of 20 groups

Environmental

Operating Temperature °C	-30 to +60
Storage Temperature °C	-40 to +85
Humidity	ETS 300 019-1-5 class 5.1 and 5.2 EIA/TIA 603 (95%)
Dust and Water	IP54 (cat.2) Standard control head
Dust and Water	IP57 (cat.2) Motorcycle control head
Shock, drop and vibration	ETS 300 019-1-5 class 5M2 and 5M3 MIL 810 C/D/E/F

RF Specifications

Frequency Band	MHz	380-430/450-470/806-870
Transmit Band	MHz	380-430/450-470/806-825
Receive Band	MHz	380-430/450-470/851-870
DMO Band	MHz	380-430/450-470/851-870
RF Channel Bandwidth	kHz	25
Switching Bandwidth (TMO)	MHz	50 (380-430)
Switching Bandwidth (DMO)	MHz	50 (380-430)
Transmitter/Receiver Separation	MHz	10 (380-430)
Transmitter RF Power	Watt	3 (380-430) Class 3
RF Power Control		4 Steps of 5 dB
RF Power Level Accuracy +/-	db	2
Receiver Class		A and B
Receiver Static Sensitivity	dBm	-112 minimum -114 typical
Receiver Dynamic Sensitivity	dBm	-103 minimum -105 typical

GPS Specifications

Simultaneous Satellites	12
Mode of operation	Autonomous or assisted (A-GPS)
GPS antenna	Lead with FME connector for standard GPS antennae (5V,25mA Supply)
Sensitivity	-152 dbm/-182dbW
Accuracy	5 meter (50% probable) 10 meter (95% probable) †

† Measured at -137 dbm



The information contained in this brochure may be subject to change without further notice

- Please note all product features are subject to infrastructure support
- Selected features are subject to optional or future software upgrade
- The availability of accessories included in this document are subject to change without notice

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