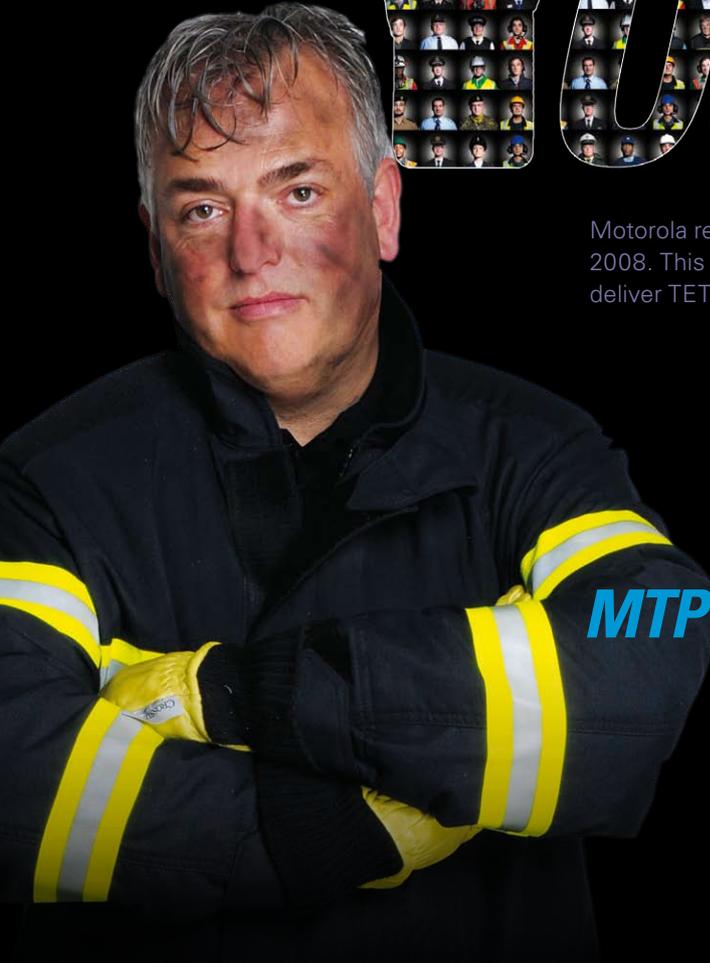# MTP850 TETRA Handportable Terminal

Versatile and adaptable voice and Data Communications

## ONE MILLION AND COUNTING…

# 1 000 000

Motorola reached the milestone of 1 Million TETRA Radios shipped at the end of 2008. This demonstrates the trust that users around the world put in Motorola to deliver TETRA service for their mission effectiveness and personal safety.

# MTP850 TETRA TERMINAL

## We test our terminals in our labs, not on our Customers

**Motorola has been designing Mission Critical Communications for over 70 years and if there's one thing we've learned it's that Public Safety is a tough place to be.**

**Not just in the obvious places, like the fires or the major incidents, but it's a tough place every single day.**

**It's that experience that has taught us that all of our products need to be tough, 'every single day' tough.**

### That's why we came up with our Accelerated Life Testing

Our ALT™ and other programmes test our radios to simulate a full five years of hard use. Five years worth of being dropped, bashed, shaken, heated, frozen, shocked, and soaked; And that's not just five 'consumer' years, but five 'mission critical' years of hard use.

Durability is only one half of the story, we test for toughness too. Here are a couple of examples of standard tests that all, not just our rugged ones, terminals have to exceed;

• **Thermal Shock Test** - Frozen to -57°C for two hours, them heated to +80°C in less than fifteen seconds and kept there for a further two hours. This is then repeated a further five times in 24 hours.

• **Drop Test** - Dropped from a height of 1.2 meters on each of the six faces of the radio onto a smooth concrete or steel surface. This is repeated and only passes if the terminal continues to function throughout the test and this includes the battery not falling off and providing continuous power to the terminal.

# *HIGH POWER AND HIGH SENSITIVITY COUPLED WITH EASE OF USE*

Featuring fully integrated voice and data services that can provide access to up to date information to make quick and informed decisions. The MTP850 also features a superior, customisable menu system with fast access to essential features including talkgroups, contact lists, mailbox, text messaging and the powerful 'My Groups' feature for rapid access to common talkgroups.

New for 2009. Adding Class 3L (1.8W) power output as an option will improve coverage in DMO usage. Taken together with high receiver sensitivity this gives the MTP850 the TETRA capability for the most demanding critical communication applications.

**Improved productivity through:**

- Instant access to information databases through integrated WAP browser - make decisions based on the latest information.

- Update your availability and situation using Status Messaging - monitor the progress of job assignments, or call for support when needed.

**Improved resource management through:**

- Ability to locate resources - with state of the art integrated GPS receiver.

- Knowing where your resources are enables you to allocate tasks based on up to date information.

- Integrated Terminal management which automatically configures radios and uploads latest software.

**Improved security through:**

- Hitting the emergency button not only alerts colleagues to critical situations, but sends and updates your location, so help is sent when and where it is needed. GPS position is also relayed to the control desk when in Direct Mode Operation. Silent emergency enables the user to send emergency alerts without an indication on the screen. This will be vital in some high risk situations.

- Secure communications, whether inherent protection from TETRA digital signalling or encrypted communications. The MTP850 supports both TETRA Air Interface Encryption and for those with enhanced security needs - End to End Encryption solutions.

## Terminal Services - Ensuring Maximum Performance to Meet your Mission Critical Requirements

- **Service Centre Excellence**: We deliver. With our proven same day repair capability, you can be sure your equipment is expertly repaired and back in your end users' hands quickly. Using the latest tools and with strict adherence to Motorola engineering procedures, our European Radio Support Centre's expert technicians diagnose and repair units to original manufacturing specifications.

- **Technical Expertise**: Get answers to your technical questions, reduce downtime and improve issue resolution times. Experienced technical support engineers work with you to diagnose and resolve hardware and software problems resulting in swift resolution of issues for your end users.

- **Customer Service**: A single source for support delivered through our new state of the art call centre, available 24x7 to track customer issues and 8x5 for technical support. Ready to assist by telephone, e-mail or fax.

- **Certified solutions**: All our services are fully certified to comply with ISO, ATEX / FM and CENELEC thereby providing the peace of mind that can only come from an experienced and trusted supplier.

- **Defined Service Level Agreements (SLAs)**: All Motorola services are offered to committed SLAs including turnaround times.

## SAFETY AND EFFECTIVENESS THROUGH

**1 Class 3L Transmit Power and High Receiver Sensitivity**
The MTP850 has been upgraded with a more powerful transmit power option. This will benefit the user with greater DMO range and in building coverage.

**2 Designed to Deliver - Designed for the Future**
The MTP850 comes with processing power to ensure users can take advantage of applications such as WAP and Multi Slot Packet Data.

**3 Personal Safety**
Protecting your staff is vital. The MTP850 helps you achieve this, with its high quality voice calls, backed up by emergency calls with automatic location updates.

**4 True Colour - Truly Original**
The MTP850 has a 130 x 130 pixel display capable of displaying over 65,000 colours - ideal for viewing high resolution images via your WAP browser.

**5 Secure Communications**
Maintaining private and secure communications is increasingly important, with potentially sensitive information flowing through voice or data. The MTP850 provides security, from inherent protection of a digital system to the highest levels of security using Air Interface Encryption or an integrated End-to-End.

# PERFORMANCE MATCHED ACCESSORIES

Professional radio users operate in varied and demanding conditions.
Enhance your MTP850 with a wide range of Motorola Genuine.

**Audio Accessories**
From covert surveillance to high noise environments Motorola offers solutions to meet your needs

**Carry Options**
Carrying accessories in various forms and materials. Coupled with audio accessories, a Motorola solution offers convenience and hands free mobility

**Batteries**
Genuine Motorola batteries designed to deliver optimum performance

**Charging & Vehicle Solutions**
Whether on your desk or in your vehicle, Motorola charging solutions maximise

## GENERAL

| Dimensions HxWxD mm | 125 x 50 x 37.5 | (with standard battery) |
|---|---|---|
| Weight | 170 g | (radio only) |
| | 240g | (with standard battery) |
| Battery Performance | Class 4 (1W) | Class 3L (1.8W) |
| Duty Cycle (5/5/90) | > 23 hours | > 20.5 hours |
| Duty Cycle (5/35/60) | > 17 hours | > 15.5 hours |
| Talk Time | 3.5 hours | 2.5 hours |

## RF SPECIFICATIONS

| Frequency Bands | 380-430 MHz |
|---|---|
| Transmitter RF Power | Class 3L (1.8W) & Class 4 (1W) |
| RF Power Level Accuracy | 2 dB |
| Adaptive Power Control | A and B |
| Receiver Class | A and B |
| Receiver Static Sensitivity | -112 dBm minimum (-115 dBm typical) |
| Receiver Dynamic Sensitivity | -103 dBm minimum (-107 dBm typical) |

## ENVIRONMENTAL SPECIFICATIONS

| Operating Temperature °C | -30 to +60 |
|---|---|
| Storage Temperature °C | -40 to +85 |
| Humidity | ETSI 300 019-1-7 class 7.3E |
| Dust and Water Ingress Protection | IP54 per IEC 60529 |
| Shock, drop and vibration | ETSI 300-019 1-7 class 5M3 |

## LICENSES/OPTIONS

| LICENSES/OPTIONS | ACCESSORIES |
|---|---|
| Call-Out License | Antennas (stubby, whip) |
| GPS License | Battery (Li Ion 1850 mAh) |
| Multi-Slot Packet Data License | Various carrying solutions |
| WAP Browser License | Battery Chargers & Vehicle Adapters |
| Enhanced Security License | Audio headsets |
| Permanent Disable License | Remote Speaker Microphones |
| Temporary Disable License | Earpieces |
| RUA/RUI License | In-Vehicle Solutions |
| Language & Keypad Options | Serial & USB Programming/Data Cables |
| Air Interface Encryption Options | |
| End to End Encryption Options | |
| Class 3L (1.8W) License | |

## SECURITY SERVICES

| Authentication (Mutual) |
|---|
| Class 1, 2, and 3 |
| Air Interface Encryption (CESG Baseline) |
| E2E Encryption (CESG Enhanced) |

## MAIN DATA SERVICES

| Packet Data | WAP Browser (Image Browsing) |
|---|---|
| | Multi-Slot Packet Data |
| Short Data | STATUS Messaging in TMO & DMO |
| | SDS Messaging in TMO & DMO |
| | Short Data Applications |
| TNP1 | Simultaneous operation of Packet Data and Short Data Services |
| | over a common Peripheral Equipment Interface (PEI) |
| AT Commands | Full Set of AT Commands (including Voice Control) |
| iTM | Fleet Management (Remote Programming ) |

## LOCATION SERVICES

| Simultaneous Satellites | 12 |
|---|---|
| GPS antenna | Helical integrated into TETRA antenna |
| Sensitivity | -152 dbm / -182 dbW |
| Accuracy | 5 meter (50% probable)* |
| | 10 meter (95% probable)* |
| Protocols | ETSI LIP & Motorola LRRP |

## USER INTERFACE

| | |
|---|---|
| Colour Display | 130x130 pixel screen with 65,536 vivid colours |
| | Flip screen and large/x-large text & icon options Backlight |
| Screen Saver | gif image & text (any user's selection) |
| Universal Time Display | |
| Multiple Languages | |
| Keypad Lock | |
| Talkgroup Management | User friendly, flexible, efficient, fast |
| Talkgroups – TMO | 2048 |
| Talkgroups – DMO | 1024 |
| Talkgroup Folders | Dual layer folder structure (folder/subfolder) 256 folders |
| Favourite Folders | Up to 3 (to store any favourite talkgroup) |
| Menu | Tailored to user needs |
| | Menu Shortcuts |
| | Menu Configuration |
| Contacts Management | Cellular Type (Rapid Search) |
| Contact List | up to 1000 contacts |
| | up to 6 numbers per contact, max 2000 numbers |
| Multiple Dialling Methods | user selects how to dial |
| Fast/Flexible Call Response | Private Call Response to a Group Call via One Touch Button |
| Vibrator & Multiple Ring Tones | |
| Message Manager | Cellular Type (Flexible) |
| Text message list | 20 |
| Intelligent Keypad Text Input | |
| Status list | 100 |
| Country/Network Code List | 100 |
| Scan lists | 40 lists of 20 groups |
| User Controls | |
| Multi-function Rotary Knob | Volume, List Scroll, and/or Talkgroup Selection |
| One touch Buttons & Keys | each button key can be programmed with one |
| | of the multiple functions available |
| Adaptive Audio Control | Best audio profile for a given working environment |
| Covert Mode | |

## MAIN VOICE SERVICES

| | | |
|---|---|---|
| Full Duplex | TMO | Private, PABX, PSTN, Emergency |
| Half Duplex | TMO | Private, Group, Emergency |
| | DMO | Private, Group, Emergency |
| | | Inter-MNI, Gateway, Repeater |
| Dialling | | Direct, Scroll, Speed, One touch but- |
| ton/key, | | |
| | | Alpha Search, Call History Redial |
| Emergency | Tactical | Emergency Group Call to ATTACHED |
| talkgroup | | |
| (tailored by users) | Non-Tactical | Emergency Group Call to DEDICATED |
| talkgroup | | |
| | Individual | Emergency Call to PREDEFINED party |
| | | (half/full duplex) |
| | HOT MIC | talk without need to PTT (user enabled) |
| | Status Msg | sent to dispatch console (user enabled) |
| | DMO to TMO | enter DMO emergency (with/without |
| | | gateway) or enter TMO emergency |
| Preemptive Priority Calls | | |
| Call Out | | |

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

• Product features may be subject to infrastructure support

• Selected features are subject to optional or future software upgrade

For more information please contact your local Motorola Authorised Dealer or Distributor

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