Accessories for a Customised Communication Solution
For Motorola Professional Series Portable Radios
Accessories for a Customised Communication Solution

For Motorola
GP328/GP338, GP329/GP339 & PTX700/760/780
Professional Portable Radio Series

2-way communication adds value to your work operations by integrating all functions seamlessly and delivering the right information to the right people at the right time.

Turn your professional radio system into a complete communications solution. Adding the proper accessories enhances the utility and productivity of your 2-way radio. Each Motorola original accessory ensures peak performance to match the standards you demand.

* Note: To ensure compliance with RF energy exposure standards and regulations, use only Motorola-approved batteries and accessories. Use of non-Motorola-approved batteries and accessories may result in RF energy exposure standards being exceeded.

Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batteries</td>
<td>3</td>
</tr>
<tr>
<td>Charging Accessories</td>
<td>4</td>
</tr>
<tr>
<td>Vehicular Accessories</td>
<td>5</td>
</tr>
<tr>
<td>Battery Maintenance System</td>
<td>6</td>
</tr>
<tr>
<td>Audio Accessories</td>
<td>6</td>
</tr>
<tr>
<td>Surveillance Kits</td>
<td>11</td>
</tr>
<tr>
<td>Ear Microphone System (Voiceducer)</td>
<td>12</td>
</tr>
<tr>
<td>Commport Integrated Ear Mic/Receiver System</td>
<td>13</td>
</tr>
<tr>
<td>Hands-Free Accessories for Special Applications</td>
<td>13</td>
</tr>
<tr>
<td>Carrying Accessories</td>
<td>14</td>
</tr>
<tr>
<td>Antenna</td>
<td>15</td>
</tr>
</tbody>
</table>
Batteries

Motorola original batteries are available in a variety of chemistries and capacities, designed to work hand-in-hand with your 2-way radios to ensure optimised performance and safety for your business.

**NICKEL METAL-HYDRIDE**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Capacity/Size</th>
<th>Avg mAH</th>
<th>Dimension</th>
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<tbody>
<tr>
<td>PMNN4008</td>
<td>High cap / standard</td>
<td>1450mAH</td>
<td>55 x 125 x 20 mm</td>
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<td>PMNN4045 (MAG ONE)</td>
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<td>Ultra-High / standard</td>
<td>1800mAH</td>
<td>55 x 125 x 22 mm</td>
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**NICKEL CADMIUM**

<table>
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<th>Capacity/Size</th>
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<tr>
<td>HNN9011</td>
<td>High cap / standard</td>
<td>1550mAH</td>
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</table>

**LITHIUM-ION**

<table>
<thead>
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<th>Capacity/Size</th>
<th>Avg mAH</th>
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<td>PMNN4023 (comes with spring clip HLN9844)</td>
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* Important note: PMNN4008, PMNN4045, PMNN4023 and HNN4003 cannot be used on low band radios

# IS – Intrinsically safe (Div 1, Class I, II, III, Groups C, D, E, F, G)

# NI – Non-incentive (Div 2, Class I Groups A, B, C, D)

**ALKALINE CLAMSHELL BATTERY**

Catering to radio users operating in remote areas without access to power source, this clamshell battery is powered by 12 “AA” alkaline cells for “always-on” communication.

The duty-cycle operation time at 5-5-90 is 10 hour (5 W Tx) and 30 hour (1 W TX) respectively which provides sufficient talk-time during remote emergency operation.

**NNTN5332** Alkaline Clamshell Battery

Recommended AA Alkaline cells:

- Part Number 6005310A01
  - AA Cell, 4/PK Duracell
- Part Number 6080390B60
  - AA Cell, 4/PK Energizer

**impres™ BATTERIES**

Impres batteries, when used with an impres charger, provide automatic, adaptive reconditioning, end of life display, and other advanced features. Data is stored in the battery and communicated to the charger via an unique impres communication protocol which is designed to maximize talk time, automate battery maintenance and optimize battery cycle life.

**impres™ NICKEL METAL-HYDRIDE**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Capacity/Size</th>
<th>Avg mAH</th>
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<td>1900mAH</td>
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<td>HNN4002</td>
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<td>1800mAH</td>
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**impres™ LITHIUM-ION**

<table>
<thead>
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<th>Part Number</th>
<th>Capacity/Size</th>
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<th>Dimension</th>
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<td>HNN4003</td>
<td>Ultra-High / standard</td>
<td>2000mAH</td>
<td>55 x 125 x 23 mm</td>
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Charging Accessories

Designed to work as a total system with the 2-way radio and battery, Motorola original chargers maximise the battery life and keep batteries in tip-top condition. Choose from the tri-chemistry single/multi unit charger to the sophisticated 6-slot battery maintenance system that provides battery health diagnostic and re-conditioning capabilities.

SINGLE UNIT TRI-CHEMISTRY, RAPID RATE

Utilise an enhanced charging algorithm that helps maximise the life of your batteries. Compatible with NiCd, NiMH and Lilon batteries. Nickel-based batteries will be fully charged in approximately 90 minutes (depending on battery capacity). Full charging of Lilon batteries may take approximately 3 hours. Allows battery only or radio/battery combination charging.

PMTN4024 Single Unit Rapid Charger
110V – US plug

PMTN4025 Single Unit Rapid Charger
230V – Euro plug

PMTN4026 Single Unit Rapid Charger
230V – UK plug

SINGLE UNIT CONDITIONING CHARGERS

Utilise enhanced pulse charging interspersed with regular discharge pulse current to minimise “memory-effect” and overheating of NiCd and NiMH batteries. A standard capacity battery takes approximately 90 minutes for a full charge. Pulse maintenance charging after a full charge maintains peak capacity for the battery.

WPLN4107 Single Unit Conditioning Charger
110V – US plug (Battery adapter included)

WPLN4106 Single Unit Conditioning Charger
230V – Euro plug (Battery adapter included)

3080384G15 Cigarette Lighter Adapter

4-SLOT CONDITIONING CHARGERS

Choose also from the four slot multi-conditioning chargers that utilise regular pulse current to minimise “memory-effect” and overheating of Nickel-based batteries. Full charging in approximately 90 minutes. Batteries must be removed from radios to perform conditioning charging since radio contacts must be used.

WPPN4065 4-Slot Multi Conditioning
110V – US cord (Battery adapter not included)

WPPN4076 4-Slot Multi Conditioning
230V – Euro cord (Battery adapter not included)

WPPN4082 Battery Adapter (Order separately)

impres™ SMART ENERGY SYSTEM

The impres smart energy system ensures maximum talk-time and optimized battery cycle life through the use of its advanced charging algorithm and automatic reconditioning features. The smart energy system reconditions impres batteries when they need it, automatically, keeping them in peak condition. Its advanced conditioning features allow batteries to be safely left on the charger for extended periods of time without incurring the damaging heat build-up which can rob batteries of cycle life. In addition, batteries left on the charger are kept fully charged so they are always ready when you need them. The impres system reconditions batteries when they need it based on their usage pattern. Talk time and cycle life are optimized and the need for manual maintenance programs eliminated. Although complete smart features are realised only when using impres batteries and chargers together, impres chargers can also handle legacy batteries; in fact, the multi-unit chargers can simultaneously charge legacy and impres batteries.

impres™ SINGLE UNIT CHARGER

WPLN4182 impres™ Single Unit Charger 110V US Plug

WPLN4183 impres™ Single Unit Charger 230V UK Plug

WPLN4184 impres™ Single Unit Charger 230V EU Plug

WPLN4185 impres™ Single Unit Charger AUST Plug

impres™ MULTI-UNIT CHARGER

WPLN4187 impres™ Multi-unit Charger US Cord

WPLN4188 impres™ Multi-unit Charger UK Cord

WPLN4190 impres™ Multi-unit Charger EU Cord

WPLN4145 impres™ Multi-unit Charger AUST Cord

WPLN4190 impres™ Multi-unit Charger KOREA Cord
**impres™ MULTI-UNIT CHARGER WITH DISPLAY MODULES**

Motorola’s impres multi-unit chargers are now available with a two line LCD display module that communicates important information. Charger Display Modules provide powerful “real time” analyzing information for impres batteries, including charge status (charging or reconditioning), current battery mAh; percent rated capacity; battery voltage; battery kit number; battery serial number; battery chemistry; time remaining to charge complete; forecast number of cycles to next reconditioning; and more.

- WPLN4192   impres™ Multi-unit Charger with Display Modules US Cord
- WPLN4193   impres™ Multi-unit Charger with Display Modules UK Cord
- WPLN4194   impres™ Multi-unit Charger with Display Modules EU Cord
- WPLN4195   impres™ Multi-unit Charger with Display Modules AUST Cord
- WPLN4146   impres™ Multi-unit Charger with Display Modules KOREA Cord

**impres™ INDIVIDUAL CHARGER DISPLAY MODULE**

These modules are designed to be retrofittable with the standard impres™ Multi-Unit Charger (WPLN4192/3/4/5/6). Up to six modules can be purchased per charger, one for each charging pocket. Includes detailed installation instructions.

- RLN5382   Charger Display Module

**Vehicular Accessories**

**MOBILE VEHICLE ADAPTERS**

This range of vehicle adapters is specially designed for the use of portable radios in a mobile environment. Once installed in a vehicle, the portable turns into a virtual mobile radio. Key features include in-vehicle charging and power, innovative antenna adapter (frequency dependent) to provide extended coverage, in-vehicle programming capability and hands-free accessibility. For proper installation and software configuration, the ENLN4114 product manual must be ordered separately.

- EN1006   VHF Vehicle Adapter (136MHz – 174MHz)
- EN1007   UHF Vehicle Adapter (403MHz – 470MHz)
- EN1008   UHF Vehicle Adapter (450MHz –527 MHz)

Above vehicle adapter models include ENLN4103 (136MHz – 174MHz) or ENLN4104 (403MHz – 470MHz) or ENLN4111 (450–527 MHz) antenna adapter respectively.

**Note:**
1. Not compatible with impres batteries
2. 12 Vdc operation only

Battery spacers for different radio/battery sizes, installation kit, mounting bracket and user guide are all included in the package.

- GMN6146   Handheld Microphone
- ENLN4114   Vehicle Adapter Product Manual
- GSN6059   External Speaker, 13 W

**TRAVEL CHARGER**

This 2-in-1 innovative travel charger combines the function of the battery eliminator and tri-chemistry charger and allows you to charge your battery even when you are away from the vehicle. With an audio accessory, it can be turned into a hands-free vehicle solution. The travel charger complete kit consists of a charger base, cigarette lighter adapter, a mounting bracket and an instruction manual.

- RLN4883A   Travel Charger
- 2580600E05   Optional 110V Desktop Power Adapter (US Plug)
- 2580600E06   Optional 230V Desktop Power Adapter (EU Plug)
- 2580600E07   Optional 230V Desktop Power Adapter (UK Plug)
Battery Maintenance System Plus (BMS Plus)

Using interchangeable battery adapters (sold separately), the BMS Plus is capable of charging and discharging, analysing, conditioning and performing cycle tests on batteries through tracking the battery’s voltage and capacity (mAh).

Latest enhancements include a software upgrade on the equipment to safely charge and analyse Lithium Ion batteries using specified Lilon adapters. This six station BMSPlus can support hundreds of 2-way, cellular and camcorder batteries.

WPLN4079 Six Station, Battery Maintenance System Plus
110V AC, 50/60Hz – US cord

WPLN4080 Six Station, Battery Maintenance System Plus
230V AC, 50/60Hz – Euro cord

WPLN4081 Six Station, Battery Maintenance System Plus
230V AC, 50/60Hz – UK cord

BMS PLUS ADAPTERS#

WPPN4079 Battery Adapter (NiCd & NiMH)

WPPN4080 Battery Adapter (NiCd, NiMH, Lilon compatible)

WPPN4085 Lilon Field Upgrade Kit
(micro, extraction tool, manual)

For upgrading of WPLN4079 / WPLN4080 / WPLN4081.

Belt clip may need to be removed from the battery to fit the adapters

Audio Accessories

Motorola’s range of audio accessories integrates perfectly with the radio to provide a personalised two-way radio solution. Built to highest quality standards, Motorola accessories are specially engineered to ensure maximum performance of your radio.

Designed as a complete solution, our extensive range of audio accessories from remote speaker microphone, headset, covert surveillance kits and special application accessories provide you the flexibility of hands-free operations and personal safety.

PUBLIC SAFETY MICROPHONE (PSM)

These public safety microphones are specially designed to cancel ambient noise during transmission. The integrated antenna provides additional antenna height for a better radiation pattern. Ideal for public safety, eg. Patrol police and emergency services. Plug in the optional receive-only earpiece to enjoy confidential listening without broadcasting the message.

AAHMN9054 UHF Public Safety Microphone
(includes UHF antenna, swivel chip, straight cord, volume toggle switch and 3.5mm jack.)

AAHMN9057 VHF Public Safety Microphone
(includes VHF antenna, swivel chip, straight cord, volume toggle switch and 3.5mm jack)

AARLN4885 Receive-only earpiece with 3.5mm plug

PMLN4620 D-Shell Receive-only earpiece with 3.5mm plug
REMOTE SPEAKER MICROPHONE

Remote speaker microphone provides greater operational flexibility to transmit and receive messages without removing the radio from the belt or carrying case.

These small remote speaker microphones boast a revolutionary windporting feature that provides clear communication even in high winds and other severe weather conditions. Wind noise is lessened, and audio can pass through the speaker grill even when the microphone port is blocked by water, enhancing a user's confidence of clear, understandable communication when Mother Nature is uncooperative. Suitable for public safety, manufacturing, logistics and service industries operating in high wind environments.

PMLN4694 Remote Speaker Microphone (IP54)
PMMN4021 Remote Speaker Microphone with 3.5mm Audio Jack (IP54)
PMMN4027 Remote Speaker Microphone (IP57)

The Heavy Duty Remote Speaker Microphone is designed with an exceptionally rugged housing for rugged work environments, and comes with a Hi/Lo Volume Control for quick and easy access to volume control. Also boasting the windporting feature, it is ideal for firefighters, police and other public safety professionals. The large housing is beneficial for users needing to access the radio while wearing gloves.

PMMN4044 Heavy Duty Remote Speaker Microphone with Hi/Lo Volume Control (IP57)

The Noise Cancelling Remote Speaker Microphone is designed to cancel out ambient noise during transmission. Suitable for use in high ambient noise environments. The large housing is beneficial for users needing to access the radio while wearing gloves.

PMMN4039 Noise Cancelling Remote Speaker Microphone with 3.5mm Audio Jack (IP54)

OPTIONAL SECONDARY ACCESSORIES FOR REMOTE SPEAKER MICROPHONES

PMLN4620 D-Shell Receive-only earpiece
AARLN4885 Receive-Only Covered Earbud with Coiled Cord
RLN4941 Receive-Only Earpiece with Translucent Tube and Rubber Eartip
WADN4190 Receive-Only Flexible Earpiece

STANDARD EARPIECE/EARSET

Standard earpiece/earset provides hands-free mobility that matches your business budget. It also enhances the level of professionalism and image that customers expect from any organisation. It is suitable for users in retail, hotel, catering, hospitality and catering services.

PMLN4418 Earbud with combined Microphone / Push-To-Talk (PTT)
PMLN4653 D-hook Earset with flexible Microphone tube
PMLN5000 D-Shell Earpiece with Combined Microphone/Push-To-Talk (PTT)

Small earpiece that fits comfortably to the ear to ensure private conversations without being overheard. A clip-on thumb style, compact Microphone/PTT allows users easy access to conduct conversations.

FLEXIBLE EAR RECEIVER

The Flexible Ear Receiver contains a flexible ear-loop and speaker and rests external to the ear. Receive only.

ENMN4013 Flexible Ear Receiver
7580372E11 Replacement Foam Ear Cushions
PMMN4021  Remote Speaker Microphone

AZRMN4022  2-wire Surveillance kit
0180358B38  Remote Ring PTT Switch
AZRMN4045  VOX/PTT Radio Interface Module
BDN6677  Standard ear Microphone (black)

AZRMN4018  Light Weight Headset with Boom Mic
            and in-line PTT
HEADSETS
For moderate/noisy environments in high activity operations, the headset is designed to secure firmly on the head, an ideal companion for your hands-free needs. Choose from the light weight headsets that are suitable for use in low noise environment to the heavy duty headsets equipped with hearing protection.

LIGHT WEIGHT HEADSETS
The light weight headset sits firmly over the ear and allows high clarity, hands-free communications while adding comfort for extended wear. It is most suitable for users in entertainment, retail, sports and logistics industries.

- AARMN4017  Ultralite Headset with Boom Microphone, earbud style receiver
- ENMN4012  Behind-the-head Ultralite Headset (In-line PTT)
- AZRMN4031  Light Weight Headset with Swivel Boom Microphone (compatible with internal VOX)
- AZRMN4018  Light Weight Headset with Boom Microphone and In-Line PTT

MEDIUM WEIGHT HEADSETS
Medium weight dual-muff headsets offer high-clarity sound with limited hearing protection for consistent and clear two-way communications in harsh and noisy situations. Available in “over-the-head” designs, they are suitable for construction, manufacturing, petrochemical and air transport industries.

- AZRMN4032  Medium Weight Dual-Muff Headset with Swivel Boom Microphone (over the head – 24dB noise reduction compatible with internal VOX)
- AZRMN4019  Medium Weight Dual-Muff Headset with Swivel Boom Microphone and In-Line PTT (over the head – 24dB noise reduction)
- ENMN4016  Medium Weight Behind-the-head headset with Swivel Boom Microphone and In-line PTT

HEAVY DUTY HEADSET
The Heavy-duty headset includes a noise-cancelling boom microphone with good hearing protection and external VOX function. This headset allows flexible “over-the-head” or “behind-the-head” fitting, can be worn with or without a hardhat and is suitable for use in noise levels up to 125dB. Suitable for mining, petro-chemical, marine and air transport industries.

- AZRMN4020  Heavy Duty Headset with Noise-Cancelling Boom Microphone

RACING HEADSET
This heavy-duty headset can be worn with most hardhats. Ideal for high noise environments; racing teams like CART® use it in the pits for dependable communication. Adapter Cable required.

- RMN5015  Racing Headset - Heavy Duty, behind-the-head headset with noise cancelling swivelboom microphone. Noise Reduction rating 24dB (adapter cable required and sold separately)
- RKN4091  Racing Headset Adapter Cable

HARDHAT MOUNT HEADSET
Mounts easily to hardhats with slots and provide significant noise reduction in louder work environments.

- RMN4051  Hardhat Mount Headset; Provides 22dB of noise reduction; dual muff (adapter cable required and sold separately)
- RKN4097  Hardhat Mount and Tactical Headset Cable of In-line PTT adapter for use with RMN4051 / RMN4052 / RMN4053
TACTICAL MEDIUM WEIGHT HEADSETS

Ideal for two-way communication in extremely noisy environments. Dual-muff, tactical headsets offer the same high-clarity sound and additional hearing protection as our medium weight headsets, while including 2 microphones on the outside of earcups which reproduce ambient sound back into headset. Harmful sounds are suppressed to safe levels, and low sounds are amplified up to 5 times original level, but never more than 82dB. Has on/off volume control on earcups. Easily replaceable ear seals are filled with a liquid and foam combination to provide excellent sealing and comfort. 3-foot coiled cord assembly included. Adapter Cable required. Hardhat not included.

RMN4052  Tactical Headband Style Headset with Boom Mic Grey; Noise Reduction Rating of 24db; (adapter cable required and sold separately)

RMN4053  Tactical Hardhat Mount Headset, Grey; Noise Reduction Rating of 22db; (adapter cable required and sold separately)

RKN4097  Hardhat Mount and Tactical Headset adapter Cable with In-line PTT for use with RMN4051 / RMN4052 / RMN4053

SURVEILLANCE KITS

Surveillance kits are unobtrusively designed, making them the ideal audio accessories for effective communication in covert operations. Most suitable for security forces, special intelligence, military, law enforcement and public safety.

COVERT SURVEILLANCE KITS

Surveillance kits come in beige or black colours and can be easily concealed and camouflaged to allow discrete communications. The earpiece is designed with expandable flexibility for use with optional accessories (noise kits/wireless discrete earpiece) to enhance discrete and mission critical operations.

1-wire Surveillance Kits provide only listening capability making them suitable for users who only need to receive instructions/messages.

AZRMN4021  1-wire surveillance earpiece (Biege)
AZRMN4028  1-wire surveillance earpiece (Black)

2-wire Surveillance Kits are equipped with combined microphone and PTT in a single housing for receiving and transmission of messages.

AZRMN4022  2-wire surveillance earpiece with combined microphone/PTT (Biege)
AZRMN4029  2-wire surveillance earpiece with combined microphone/PTT (Black)
PMLN4607  2-wire surveillance kit with clear acoustic earpiece (not compatible with Noise Kits and Wireless Discrete Earpiece below)

3-wire Surveillance Kits come with a separate earpiece, microphone and a remote palm PTT that make them versatile and convenient for users to wear and communicate without being seen.

ENMN4017  3-wire surveillance earpiece with separate microphone and Palm PTT (Beige)
ENMN4014  3-wire surveillance earpiece with separate microphone and Palm PTT (Black)
OPTIONAL ACCESSORIES FOR SURVEILLANCE KITS – NOISE KITS

Ultra-light acoustic transparent tube that attaches to the surveillance kits by removing the existing earpiece. Provides flexibility and comfort and/or noise protection for users wearing surveillance accessories. The Quick Disconnect translucent tube allows users, especially those in multiple shift operations, to remove or alternate acoustic tubes for personal hygiene. Clothing clip prevents accessory from being pulled from the ear due to body movement or head rotation.

RLN6232 Low Noise Kit. Includes rubber ear tip for low noise environments. (Black)
RLN6241 Low Noise Kit. Includes rubber ear tip for low noise environments. (Beige)
RLN6230 Extreme Noise Kit. Includes 2 foam ear plugs for noisy environments and provides 24dB of noise reduction. (Black)
RLN6231 Extreme Noise Kit. Includes 2 foam ear plugs for noisy environments and provides 24dB of noise reduction. (Beige)
RLN6242 Quick disconnect acoustic tube replacement

WIRELESS DISCRETE EARPIECE

Enables users to communicate with ease, in full privacy, without any visible devices or wires. This miniature receiver is discretely hidden and fits the ear comfortably for extended use. It offers a full range of audio functions including automatic squelch, gain control and noise filtering.

Available in a kit that includes a wireless receiver and an inductive loop. For use, simply remove the earpiece on any standard 2 or 3-wire Motorola surveillance kit (sold separately) and plug in the neck loop. Spare batteries and earwax guards are also included.

RLN4922 Wireless Discrete Earpiece

EAR MICROPHONE SYSTEM (VOICEDUCER)

This integrated earpiece/microphone utilises ear bone conduction to transmit voice thereby minimising external noise interference. The miniature earpiece/microphone enables hands-free operations and leaves the user’s face unobscured especially when worn by personnel during rescue operations.

PTT radio interface module or VOX/PTT radio interface module must be used with the integrated earpiece/microphone to complete the system. The latter VOX/PTT module allows total hands-free without the need to PTT (push-to-talk) by utilising the external VOX (Voice Activated Transmission) feature. Choose also from optional remote PTTs (ring PTT or body switch PTT) to increase the functionality of the ear microphone system.

Ideal for listening and speaking in high noise environment and applications that require wearing of breathing apparatus and protective masks. Target markets include Armed Forces, Police SWAT team, military defence teams, security teams, chemical rescue and industrial organisations.

BDN6677 Standard Ear Microphone (Black). For noise levels up to 95dB
BDN6678 Standard Ear Microphone (Beige). For noise levels up to 95dB
BDN6641 High Noise Ear Microphone (Grey). For noise levels up to 105dB
AZRMN4044 PTT only Radio Interface Module
AZRMN4045 VOX/PTT Radio Interface Module
0180300E83 Remote Body PTT Switch (Optional)
0180358B38 Remote Ring PTT Switch (Optional)
COMMPORT INTEGRATED EAR MICROPHONE/RECEIVER SYSTEM

This state-of-the-art Commport system contains a miniature microphone and receiver employing the latest sound wave and digital processing technology. Major benefits are superior sound quality and clarity as well as extreme comfort even for extended wear to hear and speak in high noise backgrounds. Available in different configurations (radio PTT adapter, ring PTT, palm PTT), the Commport system’s robust construction is suitable for emergency services, firefighters, SWAT or police in covert operations, or workers operating in noisy manufacturing, transportation or event management environments.

NTN1724 Integrated Ear Microphone/Receiver System (Ring PTT & AAHLN9717)
NTN1723 Integrated Ear Microphone/Receiver System (Palm PTT & AAHLN9717)
NTN1722 Integrated Ear Microphone/Receiver System (Radio Adapter PTT & AAHLN9717)
NTN1737 Integrated ear Microphone/Receiver System (Snap-on-side PTT & AAHLN9717)
NNTN4187 Integrated ear Microphone/Receiver System (Body PTT adapter & AAHLN9717)
AAHLN9717 Radio Adapter
NTN8986 Adhesive pads (qty = 90) for secure attachment to ear
NTN8988 Ear Straps (qty = 10) for secure attachment to ear

HANDS-FREE ACCESSORIES FOR SPECIAL APPLICATIONS

HELMET-COM AND NOISE-COM

The latest helmet-com is specially designed for users wearing any type of helmet (fire rescue, riot police, motorcycle, police troops) operating in harsh and hazardous conditions. Utilising a skull bone conduction microphone and effective speaker via a patented bracket system, it is connected to the 2-way radios via a large rugged fire retardant PTT that provides the electronic “brain” to optimise the amplification and acoustic filtering of the bone conduction microphone. This low profile PTT also meets water (splash) proof (IP55) and intrinsically safe standards.

ENMN4018 Helmet-com with com-PTT system (ENMN4011 + ENLN4135)
ENMN4011 Helmet-com unit (replacement item)
ENLN4135 Com-PTT unit (replacement item)

TEMPLE-TRANSUDER HEADSET

Specially engineered for users with hearing loss or hearing impairment, this innovative temple-transducer headset converts receive sound signals to vibration pressure signals, which in turn is converted by the human brain as intelligible, listening messages. Since it no longer uses the human ear canal to receive sound, this headset is ideal for working environments that are subject to extreme high noise as well as for users who need to listen to external background. The “behind-the-neck” headset style makes it comfortable for extended wear and can be worn with hats or helmets.

RMN4048 Temple Transducer headset with PTT
RMN5048 Rugged Temple Transducer headset with PTT

The noise-com provides a cost effective, flexible, non-personal solution for users with existing hearing protectors/ear muffs operating in noisy environments. The noise-com unit easily fits to any hearing protector muff and can connect directly to the radio. Target markets are aviation, rail transport, heavy industry and manufacturing services.

ENMN4010 Noise-com

NTN1724 Integrated Ear Microphone/Receiver System (Ring PTT & AAHLN9717)
NTN1723 Integrated Ear Microphone/Receiver System (Palm PTT & AAHLN9717)
NTN1722 Integrated Ear Microphone/Receiver System (Radio Adapter PTT & AAHLN9717)
CARRYING ACCESSORIES

Carrying accessories are available in varying sizes and materials designed to suit your operational needs. Use them together with the other accessories for added convenience and hands-free mobility. Tested to EME compliance.

CARRYING CASES FOR RADIO WITH SLIM LITHIUM ION BATTERY

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<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLN9670</td>
<td>Hard Leather, swivel loop, non-keypad</td>
</tr>
<tr>
<td>HLN9690</td>
<td>Hard Leather, swivel loop, keypad</td>
</tr>
<tr>
<td>HLN9652</td>
<td>Hard Leather, Belt loop, D-Ring, non-keypad</td>
</tr>
<tr>
<td>HLN9677</td>
<td>Hard Leather, Belt loop, D-Ring, keypad</td>
</tr>
</tbody>
</table>

CARRYING CASES FOR RADIO WITH NIMH, NICD AND FM BATTERIES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLN9665</td>
<td>Hard Leather, Belt Loop, D-Ring, non-keypad</td>
</tr>
<tr>
<td>HLN9676</td>
<td>Hard Leather, Swivel Loop, non-keypad</td>
</tr>
<tr>
<td>HLN9689</td>
<td>Hard Leather, Belt Loop, D-Ring, keypad</td>
</tr>
<tr>
<td>HLN9694</td>
<td>Hard Leather, Swivel Loop, keypad</td>
</tr>
</tbody>
</table>

CARRYING CASES FOR RADIO WITH ALL BATTERY SIZES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMLN4280</td>
<td>Soft Leather, Swivel clip, keypad</td>
</tr>
<tr>
<td>PMLN4281</td>
<td>Soft Leather, Swivel clip, non-keypad</td>
</tr>
<tr>
<td>HLN9701</td>
<td>Hard Nylon, Belt loop, D-Ring, non-keypad</td>
</tr>
</tbody>
</table>

*D-Ring models can be used with shoulder strap NTN5243

CARRYING CASES FOR RADIO WITH ALL BATTERY SIZES

<table>
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<th>Part Number</th>
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<tbody>
<tr>
<td>PMLN4280</td>
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</tr>
<tr>
<td>PMLN4281</td>
<td>Soft Leather, Swivel clip, non-keypad</td>
</tr>
<tr>
<td>HLN9701</td>
<td>Hard Nylon, Belt loop, D-Ring, non-keypad</td>
</tr>
<tr>
<td></td>
<td>(Not compatible with ultra-high batteries and impres™ batteries)</td>
</tr>
</tbody>
</table>

UNIVERSAL CARRYING ACCESSORIES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLN6602</td>
<td>Universal Carrying Accessories Chest Pack</td>
</tr>
<tr>
<td></td>
<td>Designed with a radio holder, pen holder, and velcro secured pocket.</td>
</tr>
<tr>
<td></td>
<td>(Not compatible with 900MHz and UHF Band radios)</td>
</tr>
<tr>
<td>RLN4815</td>
<td>RadioPak™ Radio/Utility Case</td>
</tr>
<tr>
<td></td>
<td>Comfortable, useful and stylish, it can be worn round the waist to hold the radios. Includes a separate 6&quot; x 8&quot; zippered pouch to hold the other on-the-job necessities. Adjustable nylon weave belt is suitable for both men and women.</td>
</tr>
</tbody>
</table>

OPTIONAL CARRYING ACCESSORIES

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLN8414</td>
<td>Chest Pack Carry Holder</td>
</tr>
<tr>
<td>HLN9985</td>
<td>Waterproof Bag</td>
</tr>
<tr>
<td>HLN9844</td>
<td>Spring Belt clip (for 1.5in Belt Width)</td>
</tr>
<tr>
<td>HLN9714</td>
<td>Spring Belt clip (for 2.0in Belt Width)</td>
</tr>
<tr>
<td>NTN5243</td>
<td>Shoulder Carrying Strap (use with carrying cases with D-Rings)</td>
</tr>
<tr>
<td>HLN9149</td>
<td>Swivel Belt Loop Adapter</td>
</tr>
<tr>
<td></td>
<td>(for use with HLN9652, HLN9677, HLN9665, HLN9689, HLN9701)</td>
</tr>
</tbody>
</table>

Battery with Long Belt Clip attached (HLN9714 - order separately)
**ANTENNA**

Injection molded for rugged environments. Each antenna is tested and tuned to give maximum power and performance.

**FLEXIBLE WHIP AND HELICAL/STUBBY ANTENNA**

Flexible antenna has a one-piece finish and steel core for optimal radiation characteristics. Provides more comfort when radio is worn with belt.

Helical antennas are sturdy and reliable for years of safe communication. Each antenna is designed and optimised for best coverage and EMC compliance. The skirt at the base of the connector helps to seal out damaging elements and it is made of brass material for maximum durability.

The stubby quarter wave antenna is ideal when the radio is worn with the belt, as the short antenna is non-obtrusive.

<table>
<thead>
<tr>
<th>UHF</th>
<th>Description</th>
<th>Frequency Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMAE4016</td>
<td>UHF Whip, 14cm to 16cm</td>
<td>403 – 520mHz (standard package)</td>
</tr>
<tr>
<td>PMAE4008</td>
<td>UHF Whip, 13cm</td>
<td>470 – 520mHz</td>
</tr>
<tr>
<td>PMAE4003</td>
<td>UHF Stubby Helical, 9cm</td>
<td>430 – 470mHz</td>
</tr>
<tr>
<td>PMAE4006</td>
<td>UHF Stubby Helical, 9cm</td>
<td>465 – 495mHz</td>
</tr>
<tr>
<td>PMAE4007</td>
<td>UHF Stubby Helical, 9cm</td>
<td>490 – 527mHz</td>
</tr>
<tr>
<td>PMAE4002</td>
<td>UHF Stubby Helical, 9cm</td>
<td>403 – 433mHz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VHF</th>
<th>Description</th>
<th>Frequency Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD6502</td>
<td>VHF Helical, 13cm</td>
<td>146 - 174mHz</td>
</tr>
<tr>
<td>NAD6579</td>
<td>VHF Whip, 15cm</td>
<td>148 - 161mHz</td>
</tr>
<tr>
<td>PMAD4023</td>
<td>VHF Whip, 14cm</td>
<td>150 - 161mHz</td>
</tr>
<tr>
<td>PMAD4025</td>
<td>VHF Stubby Helical, 9cm</td>
<td>150 - 161mHz</td>
</tr>
<tr>
<td>PMAD4014</td>
<td>VHF Helical, 14cm</td>
<td>136 – 155mHz</td>
</tr>
<tr>
<td>PMAD4015</td>
<td>VHF Helical, 14cm</td>
<td>155 – 174mHz</td>
</tr>
<tr>
<td>PMAD4012</td>
<td>VHF Stubby Helical, 9cm</td>
<td>136 – 155mHz</td>
</tr>
<tr>
<td>PMAD4013</td>
<td>VHF Stubby Helical, 9cm</td>
<td>155 – 174mHz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOW BAND</th>
<th>Description</th>
<th>Frequency Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAB6064</td>
<td>LB Helical, 30cm</td>
<td>29 – 50mHz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OTHER BAND</th>
<th>Description</th>
<th>Frequency Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMAD4009</td>
<td>Stubby Helical, 9cm</td>
<td>336 – 368mHz</td>
</tr>
<tr>
<td>PMAD4020</td>
<td>Stubby Helical, 9cm</td>
<td>370 – 400mHz</td>
</tr>
</tbody>
</table>