# MSA CHIPS™ Communication System

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The Safety Company

**Streamlined communication system as a standalone or with MSA's Advanced Combat Helmet (ACH). Modular design offers flexibility to meet a wide range of applications.**

**CHIPS Communication System** features:

- User-selectable headsets provides user mission-critical communication solutions.
- Intelligent PTT module automatically configures the system, adding or dropping radios without the need to make system adjustments.
- Smart design voice verification audibly verifies changes in system settings, eliminating the need for visual change verification.
- Dual high-noise hearing protection (circumaural and in-ear) for tracked vehicle applications that require higher levels of hearing protection while maintaining situational awareness.
- Waterproof system helps to ensure that components will survive water submersion.

**CHIPS (Communication Headset Integrated Product Suite)** provides clear radio communication and hearing protection for areas where weapons may be fired. System consists of user-selectable communication headset component, intelligent PTT module, and connectors that interface with military communication radios and vehicle intercom systems.

Trust MSA for your personal hearing protection and headset communication, field-tested and proven under the most strenuous combat conditions.

***CHIPS System components and options:***

**High-Noise Circumaural Headset** is designed for high-noise environments. Circumaural muff-based headset uses speakers and spy microphone assemblies to provide users with talk-through capabilities. Headset has independent communication speaker and boom microphone. Standard kitted circumaural headset features low-profile neckband design that offers users superior integration with ACH Ballistic Helmets while maintaining situational awareness, communications, and hearing protection. Optional low-profile headband headsets are available separately. Circumaural Communication Headsets can be used in single- , dual- or triple-communication source mode, as a standalone system, or combined with High-Noise In-Ear Communication Headset for applications requiring dual hearing protection. Muffs use a gel sealing ring designed to maximize user comfort over long usage periods.

*Neckband High-Noise Communication Headset*

*Headband High-Noise Communication Headset*

# Elements of the CHIPS C

### *Low-Noise Communication Headset*

- Single-cable down leads for all communication modes
- Electret condenser boom microphone assembly for voice transmission
- Bone-conductive speaker assemblies provide tactical sound
- Used as low-noise communication headset or in high-noise environments with integration of an earplug

***OR***

### *Circumaural Communication Headset*

- High-noise hearing protection with communications
- Situation awareness using muff-mounted spy microphones
- Auto-switches from single- to dual- communication mode
- Single-cable down lead for all three communication modes
- Dual protection capable with In-Ear Communication Headset for extreme high-noise dual-protection applications

### *Radio Interfaces*

- Capable of interfacing with three communication sources simultaneously
- Two long-range radios and a vehicle intercom system
- Voice verificaton when communication sources are added or dropped
- Shielded, waterproof cables and connectors
- Assortment of radio and intercom interface connectors available

# Communication System

### *In-Ear Communication Headset*

- High-noise hearing protection with communications
- Situation awareness using ear plug-mounted spy microphones
- Auto-switches from single- to dual- communications mode
- Single-cable down lead for all communication modes
- Field-replaceable foam ear-sealing plug
- Bone-conductive microphone assembly
- Adjustable cable assembly eliminates snag issues

### *CHIPS PTT Assembly*

- Three communication modes, 2 long-range radios, 1 intercom
- Dual-communication connections,
  **1.** Muff or low-noise
  **2.** In-ear
- Volume control, **UP** or **DOWN MODE** button
- Replaceable CR-123 battery
- Voice verification for radio connection(s), volume control
- 360-degree swivel connector attaches to the users ballistic vest

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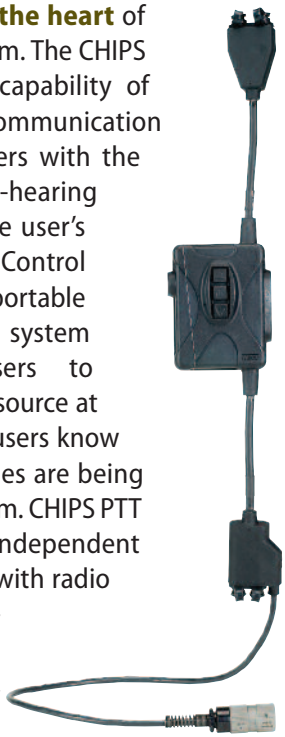
**In-Ear Communication Headset** is designed for use in high-noise environments, providing users with talk-through capabilities that employ speakers and spy microphone assemblies. User situational awareness is maintained via miniature microphones located on each earpiece that pick up ambient environmental sounds, then relaying sounds into independent speakers housed within each ear bud. Ear buds feature amplification of faint or low-level sounds while harmful sounds (gunfire, loud background noises) are efficiently filtered out. Ear buds use bone-conduction microphones to transmit outbound user communication over long-range radios or vehicle intercom systems. In-Ear Communication System uses aural sealing foam plugs available in three sizes that are designed for proper fit and maximum user comfort. Adjustable-length, plastic spring design improves ear bud fit and stability when worn.

**Low-Noise Communication Headset** is fitted with a noise-canceling microphone and two bone-conductive speakers that allow users to communicate effectively within both quiet and noisy environments. System is tactile; incoming transmissions are converted into vibrations that are transmitted through bone to the user's auditory organs for listening purposes. Users will "hear" incoming communiqués through bone conductors while their hearing is unimpeded, maximizing the soldier's situational awareness. In high-noise environments where users need to don hearing protection, bone conductors will still effectively transmit incoming messages intelligibly. Low-Noise Communication Headset can be used in single- dual- or triple-communication source mode.



**CHIPS PTT Control Module is the heart** of the CHIPS Communication System. The CHIPS PTT Control Module has the capability of interfacing with the three communication headset systems, providing users with the ability to select single- or dual-hearing protection, depending upon the user's environment. The CHIPS PTT Control Module can interface with two portable radios and a vehicle intercom system simultaneously, allowing users to distinguish the communication source at all times. Voice verification lets users know when communication capabilities are being added or dropped from the system. CHIPS PTT Control Module has its own independent battery, allowing it to interface with radio systems that do not have power-out capabilities. Communication volume adjustments are intuitive, with up/down arrows located on the face of the Control Module. CHIPS PTT Control Module selects the correct functional mode, depending upon headset(s) connected.

***Available modes are:***

1. In-Ear Communication System
2. In-Ear and Circumaural Headset Communication System
3. Circumaural Headset Communication System
4. Low-Noise Headset
5. Low-Noise Headset and hearing protection

The CHIPS Communication System can be ordered as convenient kits or as individual components, allowing users to select the components that best meet their needs.

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## Specifications:

| | |
|---|---|
| *System performance:* | temperature of use is between -20° C to +70° C |
| *Storage temperature:* | between -40° C to +75° C |
| *Relative humidity:* | tolerated from 0 to 100% |
| *Water resistant:* | IP67-rated |
| *Headset weights:* | |
| ▸ Circumaural | 445 grams (.98 lbs) |
| ▸ In-Ear | 363 grams (.80 lbs) |
| ▸ Low-Noise | 91 grams (.20 lbs) |
| *PTT Control Module:* | |
| ▸ With battery | 372 grams (.82 lbs) |
| *Interface cables with connectors:* | |
| ▸ PRC connector | 91 grams (.20 lbs) |
| ▸ VIC 3 cable | 73 grams (.16 lbs) |
| *Carry bag:* | 735 grams (1.62 lbs) |
| *Complete system weight:* | 2,170 grams (4.8 pounds) |
| *Hearing protection:* | above 82 dB |
| *Ambient noise amplification:* | below 82 dB |

***General CHIPS Communication System Warranty is one year from shipment date.***

## Ordering information for CHIPS Communication Kits

### *Circumaural Headset System*

| Part Number | Description |
|---|---|
| 10101376 | Headset, with boom mic on left, CHIPS PTT Module, and carrying bag |
| 10101377 | Headset, with boom mic on right, CHIPS PTT Module, and carrying bag |

### *In-Ear Communication System*

| Part Number | Description |
|---|---|
| 10101378 | In-Ear Com, CHIPS PTT Module, and carrying bag |

### *Combination Communication System*

| Part Number | Description |
|---|---|
| 10101379 | Headset, boom mic on left, In-Ear Com System, CHIPS PTT Module, and carrying bag |
| 10101381 | Headset, boom mic on left, In-Ear Com System, Low-Noise Communication Headset, CHIPS PTT Module, and carrying bag |
| 10101383 | In-Ear Com System, Low-Noise Communication Headset, CHIPS PTT Module, and carrying bag. |

### *Accessories*

| Part Number | Description |
|---|---|
| 10087376 | Radio land cable RC 6 pin audio |
| 10087375 | Aircraft intercom cable U-174 / TP-120 |
| 10087377 | Intercom vehicle cable VIC-3, AP107-BR |
| 10100800 | Carrying bag, CHIPS Communication System |



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