MSA Eye Protection Solutions

During shooting applications, there are hazards that can cause severe damage to human vision within a splitsecond. Possible consequences of such accidents range from simple temporary irritation up to total loss of sight. For decades, MSA offers a comprehensive range of high quality safety spectacles.



Racers

A perfect combination of dynamic style and the highest protection level.

Key product features:

- Adjustable soft nose buds for perfect fit on different nose shapes
- Formable wire temples adapt to different head sizes and provide
- Very high impact resistant single lens, compliant to :
- STANAG 4296 clause 5 test method STANAG 2920 (Beschussamt Mellrichstadt Laboratory): Velocity 230 m/s





Ordering information:

Racers EN166 1 FT (pack of 12): Sightgard coating Antifog			
10104614 Racers clear lens, Sightgard coating (Filter 2C-1,2)			
10104615 Racers amber lens, Sightgard coating (Filter 2-1,2)			
10104617	Racers smoke lens, Sightgard coating (Filter 5-2,5)		

Responder Goggle

High performance goggle providing advanced eye protection against a multitude of hazards like impacts, liquid splash, smoke, heat, hot solids, dust, wind and ultraviolet radiation.

Key product features:

- Robust and ergonomic frame design: dust and gas tight (EN 166)
- High performance double lens: Polycarbonate with EN 166 anti scratch coating (external) and Acetate with EN 166 anti fog coating (internal)
- Fire retardant, adjustable & replaceable elastic headband
- Very high impact resistant lens, compliant to STANAG 4296 clause 5 test method STANAG 2920 (Beschussamt Mellrichstadt Laboratory): Velocity 270 m/s

GA3227B Responder Goggle (clear lens: 2C-1.2 MSA 1BT 9 KN CE; frame: EN 166-3459-BT CE; 230.1 BT)



Your direct contact

MSA Nederland B.V., Hoorn Phone +31 (229) 25 03 03

> Central Europe MSA AUER GmbH, Berlin Phone +49 (30) 68 86-0 E-Mail info@msa-auer.de

MSA Safety Sp. z o.o., Warsaw

ID 09-320.2 GB/00/03.11

MSA EUROPE Regional Head Offices & Great Britain (www.msa-europe.com) Southern Europe

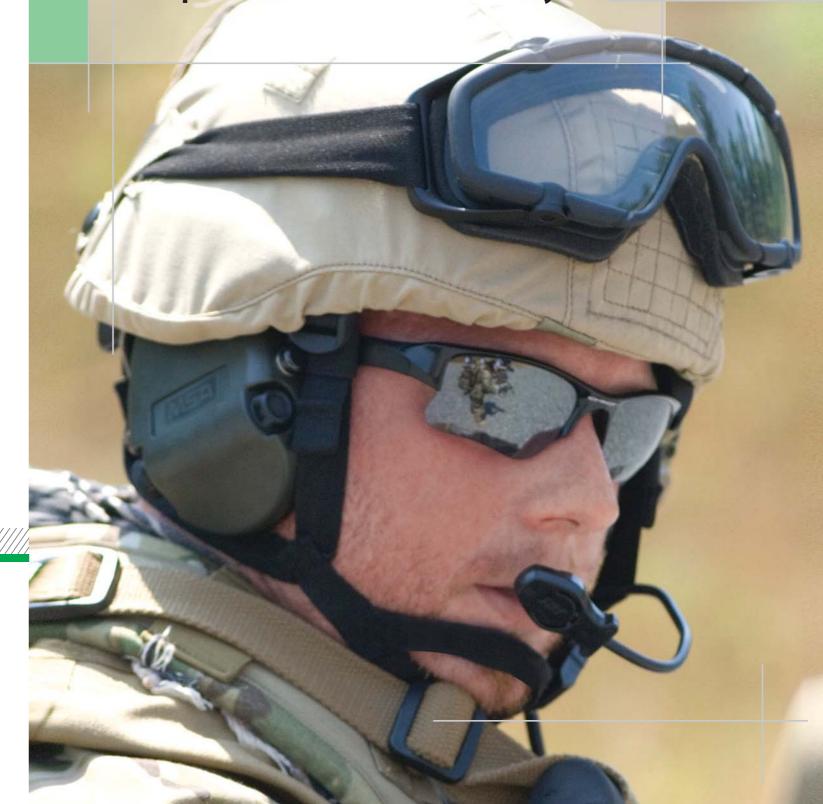
MSA GALLET, Châtillon sur Chalaronn Phone +33 (474) 55 0155 International Sales

MSA EUROPE, Berlin Phone +49 (30) 68 86-555 E-Mail contact@msa-europe.com

MSA (Britain) Limited, Bellshill Phone +44 (16 98) 57 33 57 The Safety Company



Communication, Hearing & Eye Protection for Special Forces and Military



High Performance hearing protection and communication solutions

The MSA Supreme Pro ear muff gives police officers, military personnel, and hunter's optimum hearing protection, along with the ability to hear the surrounding environment. Especially useful for target shooting, the Supreme Pro Ear Muff's ear cups are shaped to suit both right- and left-handed shooters.

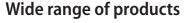
A hearing protection system with versatile functionality

The Supreme Pro Communication System integrates with ballistic helmets providing unobtrusive communications and hearing protection in areas of loud impulsive sounds, such as weapon firing zones. The system protects your hearing while enabling clear communications. Cup-mounted microphones enhance the users situational awareness, allowing the users to hear ambient sounds within the environment whilest protecting hearing. Harmful sounds are decreased to a safe level of 82 dB (A) and low-level sounds are amplified.

The communication system is used as either as a stand alone headset or with MSA's ballistic helmets, respiratory masks and eyewear.

Electronic circuit with level dependent feature

MSA has integrated high level electronic circuits in the Supreme Pro. Instead of cutting off peak sounds it compresses them down to a safe level, the so called level dependent feature. This means that you can communicate with your friends on the shooting range or in a combat situation, even when others are shooting.



MSA offer a wide range of products suitable for different applications:

Supreme Pro

High performance level dependent ear muffs amplifying weak sounds for better awareness and enable short range verbal communication.

Supreme Pro Communication headsets

A range of two-way communication headsets providing clear and trouble free communication. Available with a range of push-to-talk boxes connecting to a wide range of radio interface.

Lightweight and in-ear tactical headset

Applying bone conduction methodology, the user can communicate effectively both in quiet and noisy environments.

Passive ear muffs

The innovative left/RIGHT ear muffs, designed with individual cups for the left and right ear, is different to all other passive ear muffs on the market. They are available with three different protection levels.

Ear plugs

The RIGHT ear plug range provides high noise attenuation and comfort.

We can offer a comprehensive range of high quality ballistic safety spectacles and goggles tested according to STANAG 2920 and STANAG 4296 by an external laboratory: Beschussamt Mellrichstadt.

Whether you face routine patrol, civil unrest, drug lab raids, or even terrorist threats, you can trust MSA for your personal protection.

Supreme – high performance level dependent ear muffs

The Supreme level dependent electronic ear muffs protect you from hazardous noise at the same time as you can listen to surrounding sounds. The ambient sound is detected by two microphones mounted on the outside of each cup and reproduced through speakers inside the ear muffs. The advanced electronic design compresses hazardous noise down to a safe level while still allowing harmless noises to be heard.

By wearing Supreme ear muffs you can communicate face-to-face with other people as well as hearing commands and instructions without removing the hearing protector, even when others are shooting.

Product Overview









Supreme Pro

The Supreme Pro ear muff combines optimum protection with high amplification, AUX input and waterproof battery compartment. It is available with green or black cups, with a foldable headband or as a neckband version. As standard it is equipped with a comfortable foam sealing cushion but the headband versions are also available with a gel cushion.

Key product features:

- Cups shaped to fit both right hand and left hand shooters
- · Convenient foldable headband or neckband
- Two separate, well shielded microphones for optimum sound direction location
- High amplification and natural sound reproduction without chopping and cutting out
- Audio input (AUX) for connecting external audio sources, such as radio
- Lead with 3.5mm mono jack plug included



Supreme Pro headband



Supreme Pro neckband

Ordering information:

P/N	Type of band	Cup colour	Cushion
F/IN	Type of ballu	Cup Coloui	Cusilion
SOR75302	Foldable leather headband	Green	Foam
SOR75302-02	Foldable leather headband	Black	Foam
SOR75302-G	Foldable leather headband	Green	Gel
SOR75302-02-G	Foldable leather headband	Black	Gel
SOR76302	Neckband	Green	Foam
SOR76302-02	Neckband	Black	Foam

Supreme Pro-X

The Supreme Pro-X ear muff has the same features as the Supreme Pro with these additional features:

- Waterproof microphones (IP 67 tested)
- Optional camouflage headband
- 5 years warranty on electronics

Ordering information:

P/N	Type of band	Cup colour	Cushion
SOR75302-X	Foldable headband, camouflage	Green	Foam
SOR75302-X-G	Foldable headband, camouflage	Green	Gel
SOR75302-X-02	Foldable headband, black textile	Black	Foam
SOR75302-X-02-G	Foldable headband, black textile	Black	Gel
SOR75302-X/L	Foldable headband, leather	Green	Foam
SOR75302-X/L-G	Foldable headband, leather	Green	Gel
SOR75302-X/L-02	Foldable headband, leather	Black	Foam
SOR75302-X/L-02-G	Foldable headband, leather	Black	Gel
SOR76302-X	Neckband	Green	Foam
SOR76302-X-02	Neckband	Black	Foam



Supreme Pro-X, camouflage headband

Supreme Pro 3+

The Supreme Pro 3+ ear muff has the same electronic features as the Supreme Pro but it has larger ear cups without a bevelled bottom edge.

The larger volume provides added protection against loud noise.

Ordering information:

P/N	Type of band	Cup colour	Cushion
SOR75200	Foldable leather headband	Green	Foam



Supreme Pro 3+, leather headband

Supreme Basic

The Supreme Basic is the entry level electronic ear muff. It is designed with standard electronics and offers a maximum 1:1 sound reproduction (no amplification of low sounds).

Key product features:

- Standard electronic components
- Battery compartment inside the cup
- Available with or without audio input (AUX)
- Foldable for convenient storage

Ordering information:

P/N	Type of band	Cup colour	Cushion
SOR75300	Foldable leather headband	Green	Foam
SOR75301	Foldable leather headband, with audio input (AUX)	Green	Foam



Supreme Basic, leather headband with audio input

Two-way communication option

The Supreme Pro series can also be used for two-way communication by attaching a throat microphone in the audio input (AUX) of the ear muff (3.5 mm stereo) and then connect it to any of the Single Com PTT systems described on page 13.

The throat microphone is splash proof and has a Nexus TP120 connector for connection to the PTT system.

This flexible system is ideal when two-way communication is only occasionally required.

P/N	Description	Colour	Connector
SOR75801	Throat microphone	Black	Nexus TP120



MSA

www.msa-europe.com www.msa-europe.com

Supreme Pro Level Dependent Communication Headsets

The Supreme Pro level dependent headsets are equipped with a noise cancelling boom microphone and a heavy duty down lead. The headset provides high noise reduction yet with a slim design. The Supreme Pro headset comes in two versions, Supreme Pro CC and Supreme MIL CC. Both versions are available as a foldable headband or neckband. One version, Supreme Pro WW, also feature Bluetooth® technology for wireless connection to cell phones.

Supreme Pro headsets are available both for Single Com, for connection to one communication radio, or Dual Com, for connection to two communication radios. The headsets can be connected to the push-to-talk systems described on page 10-13.

By wearing Supreme Pro headsets you can communicate effectively and safe as well as hearing commands and instructions without removing the hearing protector, even when weapons may be fired.

Product Overview

Model	Supreme Pro WW	Supreme Pro CC	Supreme MIL CC
Band versions	•		
Foldable headband, black leather	•	•	•
Neckband	_	•	•
Colour options, ear cups			
Available colours	Green	Green, black	Green, black
Technical Specifications	·		
Weight, excluding batteries, headband version	340 g	374 g	394 g
Weight, excluding batteries, neckband version	-	326 g	346 g
Batteries	2xAAA/LR03	2xAAA/LR03	2xAAA/LR03
Estimated battery life time, subject to conditions of use	600h	600h	600h
Waterproof battery compartment			
ASIC			
Battery save function	•		
Low battery warning			
Sound level limitation, max 82 dB	•		
Amplification of weak signals			
Splash proof microphones			
Water proof microphones			
Audio input (AUX)			
Option with gel cushions		■ (special request)	■ (special request)
Type of connection	Wireless	Cable	Cable
Type of boom microphone	Electret	Electret	Electret
Two loud speakers in each cup (one for radio communication, one for level dependent			
Additional RFI protection (shield box)			
Accessories			
Hygiene kits			
Regulations			
Tested according to	EN352-1, EN	N352-4, EN352-6 and ANS	SI S3.19-1974
Attenuation data headband versions			
SNR dB (EN352)	25	25	28
H/M/L dB (EN352)	28/21/16	28/21/16	29/26/18
NRR dB (ANSI)	21	21	21
Attenuation data neckband versions	-		
SNR dB (EN352)	_	24	24
H/M/L dB (EN352)	_	26/21/15	26/21/15
NRR dB (ANSI)	_	20	20

Supreme Pro WW

The Supreme Pro WW adds wireless 2-way communication to the features of the Supreme Pro. It is equipped with Bluetooth® technology to wirelessly connect the headset to all Bluetooth® enabled devices, such as mobile phones and communication radios.

Key product features:

- Wireless connection to cell phones and certain communication radios
- Convenient hands free operation
- Transmission range around 10 meters
- Transmits in the unrestricted 2.45 GHz band
- Band width around 720 kbps

Ordering information:

P/N	Type of band	Cup colour	Cushion
SOR75318	Foldable leather headband	Green	Foam



Supreme Pro CC Single Com headset

The Supreme Pro CC is a Single Com headset, designed to be connected to a push-to-talk system and one communication radio. It's based on the Supreme Pro platform providing all features described on page 4.

Key product features:

- Equipped with a heavy duty down lead with a Nexus TP120 connecting plug or a Lemo Micro connector
- Robust noise cancelling boom microphone
- Flexible and easy to adjust microphone arm
- Equipped with one loudspeaker in each cup
- High amplification of weak sounds

Ordering information:

P/N	Type of band	Cup colour	Cushion	Connector
SOR75328-02	Foldable leather headband	Black	Foam	Nexus TP120
SOR75328-06	Foldable leather headband	Green	Foam	Nexus TP120
SOR75328-01	Foldable leather headband	Black	Foam	Lemo Micro
SOR75328-03	Foldable leather headband	Green	Foam	Lemo Micro
SOR76328-02	Neckband	Black	Foam	Nexus TP120
SOR76328-06	Neckband	Green	Foam	Nexus TP120
SOR76328-01	Neckband	Black	Foam	Lemo Micro
SOR76328-03	Neckband	Green	Foam	Lemo Micro



 ${\bf Supreme\ Pro\ CC,\ headband\ version}$



Supreme Pro CC, neckband version



M5A

Supreme MIL CC Single Com headset

The Supreme MIL CC Single Com headset is designed to be connected to a push-to-talk system and one communication radio. Water proof level dependent microphones and extra RFI (Radio Frequency Interference) protection makes it ideal for heavy duty applications.

Supreme MIL CC has two loudspeakers in each cup. One speaker is connected to the level dependent system and the other is directly connected to the external radio communication. It means that the radio communication will always work even if the unit is out of battery or switched off.

Supreme MIL CC also has all the other features of the Supreme Pro CC described before.

Key product features:

- Equipped with a heavy duty down lead with a Nexus TP120 connecting plug or a Lemo Micro connector
- Robust noise cancelling boom microphone with a flexible and easy to adjust microphone arm
- Equipped with two loudspeakers in each cup and additional RFI protection
- Water proof level dependent microphones

Ordering information:

P/N	Type of band	Cup colour	Cushion	Connector
SOR75332	Foldable leather headband	Black	Foam	Nexus TP120
SOR75332-06	Foldable leather headband	Green	Foam	Nexus TP120
SOR75332-01	Foldable leather headband	Black	Foam	Lemo Micro
SOR75332-03	Foldable leather headband	Green	Foam	Lemo Micro
SOR76332	Neckband	Black	Foam	Nexus TP1 20
SOR76332-06	Neckband	Green	Foam	Nexus TP120
SOR76332-01	Neckband	Black	Foam	Lemo Micro
SOR76332-03	Neckband	Green	Foam	Lemo Micro

Supreme MIL CC Dual Com headset

The Supreme MIL CC Dual Com headset is designed to be connected to a push-to-talk system and two communication radios. This headset is equipped with a Nexus AP117BR (7-pin) heavy duty connector.

All other product features are the same as Supreme MIL CC Single Com.

Ordering information:

P/N	Type of band	Cup colour	Cushion	Connector
SOR75332-09	Foldable leather headband	Black	Foam	Nexus AP117BR
SOR75332-08	Foldable leather headband	Green	Foam	Nexus AP117BR
SOR76332-09	Neckband	Black	Foam	Nexus AP117BR
SOR76332-08	Neckband	Green	Foam	Nexus AP117BR



Supreme MIL CC, headband version (Single or Dual Com headset)



Supreme MIL CC, neckband version (Single or Dual Com headset)

Lightweight Sensory headset

This headset features bone conduction technology where the signals are transmitted through the bone and to the auditory organs directly.

The noise cancelling boom microphone provides clear communication and the bone conductors will effectively transmit the incoming messages intelligibly even when combined with noise protective ear plugs.

This allows the user to communicate effectively, regardless of whether the user is in a quiet or noisy environment.

The headset can be connected to various push-to-talk systems and is available both for Single Com or Dual Com applications.

Ordering information:

P/N	Type of band	Colour	Connector
SOR71001	Lightweight headset, Single Com	Black	Nexus TP120
SOR71002	Lightweight headset, Dual Com	Black	Nexus AP117BR

[NEW]



Lightweight sensory headset

INVISIO® M3 In-Ear Tactical headset

INVISIO® M3 uses a bone conduct microphone. M3 offers unsurpassed performance, comfort and fit for professional users. Utilizing a form factor that has been researched and designed over the last decade, the patented Soft Spring™ adapts perfectly to the contours of the ear.

Key product features:

- Total noise elimination system for crystal clear communication
- Discrete design with superior comfort and secure fit
- Unique whisper functionality
- Compatible with helmets, respiratory masks or circumaural headsets
- Available for left- or right ear

Ordering information:

P/N	Type of band	Colour	Connector
SOR71101	INVISIO® M3 in-ear tactical headset, for left ear	Black	Nexus TP120
SOR71102	INVISIO® M3 in-ear tactical headset, for right ear	Black	Nexus TP120

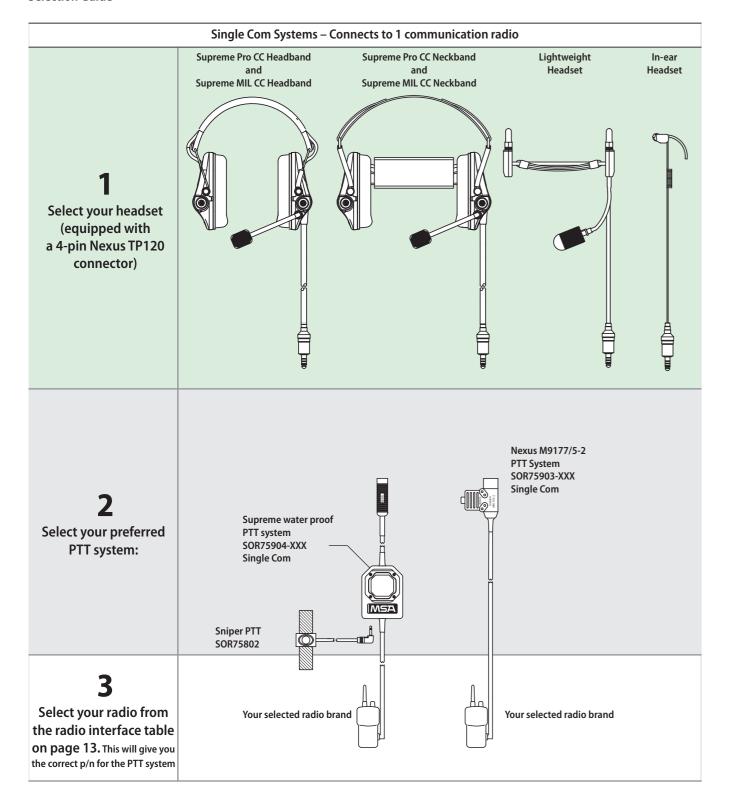


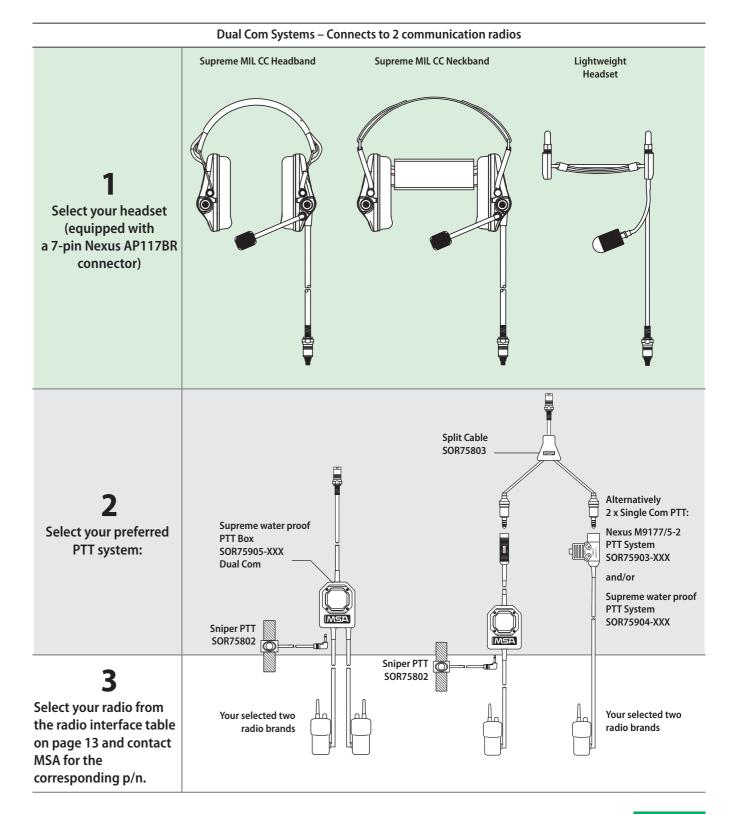
www.msa-europe.com www.msa-europe.com

Push-To-Talk (PTT) systems

MSA can offer a large number of different push-to-talk solutions depending on whether the need is to connect the headset to one-or two communication radios.

Selection Guide





MSA

MSA

Push-To-Talk (PTT) systems

NEXUS PTT System M9177/5/5-2 (U-94A/U)

The Nexus M9177/5-2 (U-94A/U) is a Single Com PTT system.

The housing is of a compact and rugged design. It has a splash proof black body with a robust click switch and a clip for attaching to clothing. It has a 520 mm coiled cable between the box and the radio interface.

See available interface and ordering numbers in the table, page 13. (Product series SOR75903-XXX)



Supreme PTT System, Single Com

A Single Com PTT system intended to be connected to one communication radio. It has a water proof, black body with a large easy to locate push-to-talk button and a clip for attaching to clothing. It also has an external input where a sniper PTT can be connected.

It has a 520 mm coiled cable between the box and the radio interface

See available interface and ordering numbers in the table, page 13. (Product series SOR75904-XXX)



Supreme PTT System, Dual Com

A Dual Com PTT system for connection to two communication radios. It has a water proof black housing with one large easy to locate push-to-talk button connected to one radio and one robust click button connected to the other radio. It also has an external input where a sniper PTT can be connected and a clip for attaching to clothing.

It can be connected to the radios specified in the table on page 13. Ask your local MSA contact for further information.

MSA Lemo Micro PTT System

The MSA Lemo Micro PTT system offers a wide range of radio interface equipped with a Lemo Micro connector. Ask your local MSA contact for more information.

Sniper PTT

A sniper PTT can also be connected to the Supreme Single Com and Dual Com PTT's. Easily attached to the external input located on the PTT boxes.

Ordering information:

P/N	Product	Colour	Connector
SOR75802	Sniper PTT	Black	2-pole, 3.5 mm



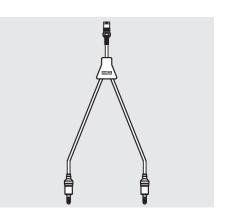
Split cable for Supreme MIL CC Dual Com headsets

With the MSA split cable you can split one headset down lead into two for separate PTT boxes. Perfect solution when you prefer to create your Dual Com system with two separate PTT boxes instead of one PTT with two push buttons.

The cable is equipped with one Nexus AJ117BR (7-pin) connector as headset connector and two Nexus TP120 connectors for the PTT boxes.

Ordering information:

P/N	Product
SOR75803	Split cable for Dual Com headsets



Communication radio interfaces for Single Com PTT System*

	Communication Radio	P/N PTT Box		
Brand	Model number	Nexus M9177/5-2 (U-94A/U)	Supreme water proof	
EADS	THR880/THR880i	SOR75903-015	SOR75904-015	
ICOM	F3, F3S, F4, F4S, F4TR ,F10, IC-H2, H6, J12, M5, U12, U16, IC4008, 4088A	SOR75903-007	SOR75904-007	
KENWOOD	TK-272G/372G, TK3130 ProTalk XLS, TK-3131 Free Talk XLS, TK-220/320, 240/340, 240D/340D, TK208/308, 430/431, 250/350/353, TK260/270, 260G/360G, 360/370, 270G/370G, 248/348, 2100/3100, 2160/3160 ProTalk, 3101 FreeTalk XL, 2102/3102 ProTalk	SOR75903-009	SOR75904-009	
LAFAYETTE	Micro3+	SOR75903-008	SOR75904-008	
MAXON	SP120, SP130, SP140, SL25, SL55, SL55+	SOR75903-003	SOR75904-003	
MAXON	SP-200, SP210, SL100 and Legacy Series-PL1145, PL2245, PL2215P, PL2245P, PL2415, PL2445, PL5161, PL5164	SOR75903-010	SOR75904-010	
MIDLAND	G7	SOR75903-008	SOR75904-008	
MOTOROLA	HT750, HT1250, HT1250LS, HT1550/HT1550XLS, MTX850/MTX850LS, MTX8250/MTX8250SL, MTX910:50 17/01/20110/MTX9250, GP140, GP320, GP328, GP338, GP340, GP360, GP380, GP640, GP1280, PRO5150, PRO9150	SOR75903-001	SOR75904-001	
MOTOROLA	GP300, SP50, P110, P-1225/P1225LS, LTS2000, CP88, CP150, CP200, CT150, CT250, CT450, CT450LS, GP308, P080, P2000, PRO2150, PRO3150, P040, P080, GP68, GP88, PR400,SP10, SP21, XTN500, XTN600, PRO1150, CP100, PMR446, XTN446, XU1100, CLS1110, CLS1410, XU2600, HLN9716, HLN9482A	SOR75903-002	SOR75904-002	
MOTOROLA	XTS3000/Astro, XTS3500, XTS2500/XTS5000 and HT-1000 Series (HT-1000, MT2000, MTS3000, MTX8000, MTX838, MTX9000, MTX-LS, JT1000), GP900	SOR75903-005	SOR75904-005	
MOTOROLA	GP-344/388,GP-328+/338+, EX-500/600, GL-2000	SOR75903-011	SOR75904-011	
SEPURA	SRP2000	SOR75903-014	SOR75904-014	
THALES	PRC-148	SOR75903-006B	SOR75904-006B	
VERTEX/YAESU	VX-310, VX200, VX500, VX-510L, VX-520U	SOR75903-007	SOR75904-007	
VERTEX/YAESU	VX-210 , VX-210A, VX-150, VX-160, VX-180, VX-246	SOR75903-012	SOR75904-012	
VERTEX/YAESU	VX-820, VX-821, VX-824, VX-829, VX-920, VX-921, VX-924, VX-929	SOR75903-013	SOR75904-013	
ZODIAC	BT-series, BT-160, BT-31	SOR75903-007	SOR75904-007	

If your radio isn't found in the list, please ask your local MSA contact for more information.

MSA



^{*}For some radio models, MSA may require that a PTT sample is tested and confirmed by customer before order confirmation.



left/RIGHT Passive Ear Muffs

The left/RIGHT passive ear muff has an innovative design, differentiating them from all other existing hearing protection. Designed with individual cups for the left and right ear it considers the anatomical individuality of the user.

left/RIGHT is available in 4 colours and with 3 different noise attenuation levels – Low, Medium and High.

The left/RIGHT is a perfect and very comfortable solution for practice shooting or other high noise environments.













Ordering information:

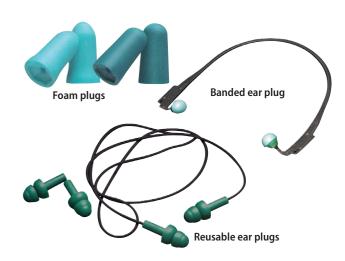
Product	P/N dark grey	P/N blue	P/N yellow	P/N white	H/M/L values (EN 352)	SNR value (EN 352)	NRR value (ANSI)	Weight
Low	10100455	10087435	10087434	10087436	27/22/14 dB	24 dB	21 dB	185 gram
Medium	10099847	10087426	10087425	10087427	32/26/17 dB	28 dB	25 dB	227 gram
High	10101164	10087400	10087399	10087421	33/31/23 dB	33 dB	28 dB	316 gram

RIGHT Ear Plugs

The RIGHT ear plugs provide high noise attenuation and comfort. The range consists of two sizes of foam plugs, corded and non-corded reusable plugs as well as a banded plug.

Ordering information:

P/N	Product	H/M/L values (EN 352)	SNR value (EN 352)	NRR value (ANSI)
10087441	Foam plug Small/medium	33/30/29 dB	33 dB	30 dB
10087444	Foam plug, medium/large	36/34/34 dB	37 dB	32 dB
10087449	Reusable ear plug, un-corded	24/20/17 dB	23 dB	23 dB
10087450	Reusable ear plug, corded	24/20/17 dB	23 dB	23 dB
10087452	Banded ear plug	27/19/18 dB	24 dB	20 dB



Accessories

Hygiene kits

To maintain the sound attenuation performance of the muffs it is important to regularly replace cushions and inserts. In normal use, replace the hygiene kit at least twice a year.

Ordering information:

P/N	Product
SOR60089	Hygiene kit standard for Supreme
SOR60092	Hygiene kit comfort (silicone ear cushions) for Supreme
10087441	Hygiene kit for left/RIGHT Low
10087444	Hygiene kit for left/RIGHT Medium
10087449	Hygiene kit for left/RIGHT High



Special headbands for Supreme Pro X

Ordering information:

ordering information.		
P/N	Product	
SOR70001	Fluorescent orange headband cover	
SORBD009	Black textile headband	
SORBD016 Camouflage headband		



www.msa-europe.com www.msa-europe.com