



# VOC<sup>COM</sup> M-215 X

„Long range communication“  
for Water cannon vehicles



- VocCom Audio Product Innovation 2020
- 25° high-performance loudspeaker for government systems
- Best speech intelligibility due to new emitter technology
- Long range due to 152 dBA/1 m sound pressure
- (92 dB at 1000 meters)

VocCom<sup>®</sup>  
audio



## About us

PASS-Medientechnik is a leading organisation in the audio communications sector, whose focus is on r&d, manufacture and marketing of VOCCOM-Audio products and systems as very high performance sound systems, also referred to as NLW (Non Lethal Weapons).

## Our expertise:

- providing a holistic set of solutions for your specific requirements.
- developing hard and software solutions that are flexible, scaleable and "future-proof" investments.

## VOC<sup>COM</sup>

## Ready today for future needs

VOCCOM-Audio modular very high power sound systems (NLW) for mobile tactical applications and communication.

- VOC<sup>COM</sup> Superior communication through greater intelligibility and far-reaching performance through an innovative combination of advanced electronics and acoustic innovation, results in the greatest possible influence on distant groups of people, from a safe distance.
- VOC<sup>COM</sup> Systems offer a flexible equipment selection for a variety of mobile tactical options on offer for current and future mission scenarios.
- VOC<sup>COM</sup> System component selection can be tailored to individual operational requirements.
- VOC<sup>COM</sup> Systems encompass a wide range of components, consisting of microphones for a range of applications, controllers (MP-900) offering a wide and diverse range of facilities, amplifiers for different



applications and speakers of different outputs, coverage and distance reach.

- VOC<sup>COM</sup> Offers world first innovative unique options, such as the Integrated Protocolrecorder PR-900 which automatically records settings including time, output level and content, as well as exact geo-positioning via GPS/Glonass, to provide a complete record of events.
- VOC<sup>COM</sup> Systems include an extensive range of accessories developed over years of practical experience including a comprehensive

## Operational Applications

VOC<sup>COM</sup>-Systems have been developed in conjunction with our users to embody the maximum in flexibility when integrated in land, sea or air operations vehicles.

### Civil Defence

Public announcements, coastguards and border control, maritime operations, convoy protection, checkpoint security, NLW operations, disorientation, perimeter security.



### Protection against threats

High risk operations as NLW (eg high risk football matches, riots, terrorist attacks), protest gatherings, political summits, alarm announcements (tsunami warnings), perimeter security

### Homeland security

Evacuation and protection of evacuees, perimeter security, emergency communications, mountain rescue



### Fire Services

Mass emergency announcements, disaster relief support, search and rescue

### Border Security

Perimeter security, warning / prevention of illegal border crossing incidents

### Civil Applications

Airport bird strike systems, PA for very large industrial installations, security for wind energy and solar energy farms, PA for large scale refugee camps



## Technical, Conflict management and Communications Training

In order to be prepared for all eventualities, emergencies and crises, regular training is essential so that all those involved are prepared for all eventualities - that co-ordination and co-operation between agencies is seamless and becomes second nature, that management of the resources and personnel at all levels ensures the fastest and most effective support possible. VOC<sup>COM</sup> is an important support asset in these scenarios.

**Your 'added value'** compact, louder, further, safer

### Flexibility:

*One platform - many operational application choices*

VOCCOM-Audio products are constantly being developed and refined to ensure utmost operational flexibility

### Design:

*Ultra-compact with optimum power, size, weight ratio*

The innovative design parameters of our products always strive to optimise performance, size and weight ratio within limits set by the Laws of Physics.

### Performance:

*High performance capability - minimal lifecycle cost - simple installation*

Our highly qualified, world renowned R&D team constantly strive to improve the size, weight and power consumption ratio of the product range. Excellent build quality combined with innovative acoustic and electronic design ensure lowest 'lifecycle' costs at the same time as long term reliability.

### Professional Customer Support from A - Z:

*Support for ongoing client project development*

VOCCOM-Audio customer support encompasses consulting, project management, Implementation, installation, maintenance, training and ongoing support. Our team of experts will advise on key operational areas and NLW applications. We will support clients in the introduction and all project implementation phases of VOCCOM-Audio products and train operators in their correct use.



### Operation and Safety:

*Industrial safety and operator protection*

Targeted investment in safety management ensures that safety orientated requirements can be adhered to and implemented. Our controller MP900 can be used with all our VOC<sup>COM</sup> systems. The MP900 with its integrated safety functions such as AP-LOCK™ and AD-HOC™ - recording, enable operators to complete their tasks more quickly and safely.

### In use the world over:

*Target orientated implementation*

VOCCOM-Audio products are deployed in military and security installations world wide, both in fixed and mobile applications depending on client and situation specific requirements for high performance sound systems. Our team of experts is constantly working with our clients to increase the performance and benefits of our products.

## Performance and safety

Our sound systems are designed to provide warnings, information and instructions over long distances from a safe distance. As well as public address over long distances, safety zones can be established to provide imminent threat warnings which can save lives. VOC<sup>COM</sup> are sound systems not weapons. The warning and communication ability



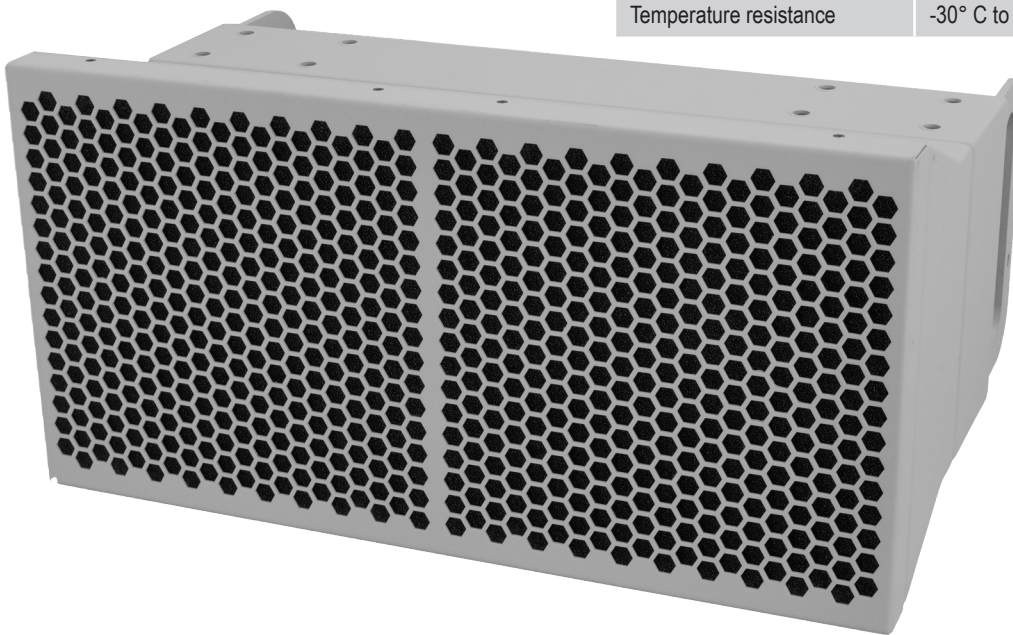
offers such high intelligibility that it makes the system ideally suited to exert psychological influence (PsyOps) like no other in this category. A high level of safety is guaranteed in difficult conditions in difficult terrain whether in urban, open country or maritime environments. The unique AD-HOC™ and AP-LOCK™ safety features are an integral part of our

# The components

## M-215X (Acoustic high power directional loudspeaker)

A new generation of transducers developed in 2020 with revolutionary results. The first system in the world that brings broadcast to this ratio of power, size and weight. Built from 2 pieces of M-4 systems, the ultra-compact module generates a common wavefront and is cascadable in both the vertical and horizontal planes without loss due to phase cancellation. Each M-215X sound reinforcement module achieves an incredible 152 dB peak and transmits speech, scaring sounds and warning signals over long distances (>1000 meters@ 92 dB).

Model	M-215X
Transmission range	± 10 dB 250 Hz bis 10 KHz
Beam angle	nominal 25° x 25°° (hor. x vert.)
Sound pressure max	(1 m) 150 dB SPL (A)
Sound pressure peak	(1 m) 152 dB SPL (A)
Dimensions/Weight	(HxWxD) 483 x 2456 x 330 / 14,5 Kg
Surface	marine-GREY
Housing design	Multilayer polymer plastic
Temperature resistance	-30° C to +70°C



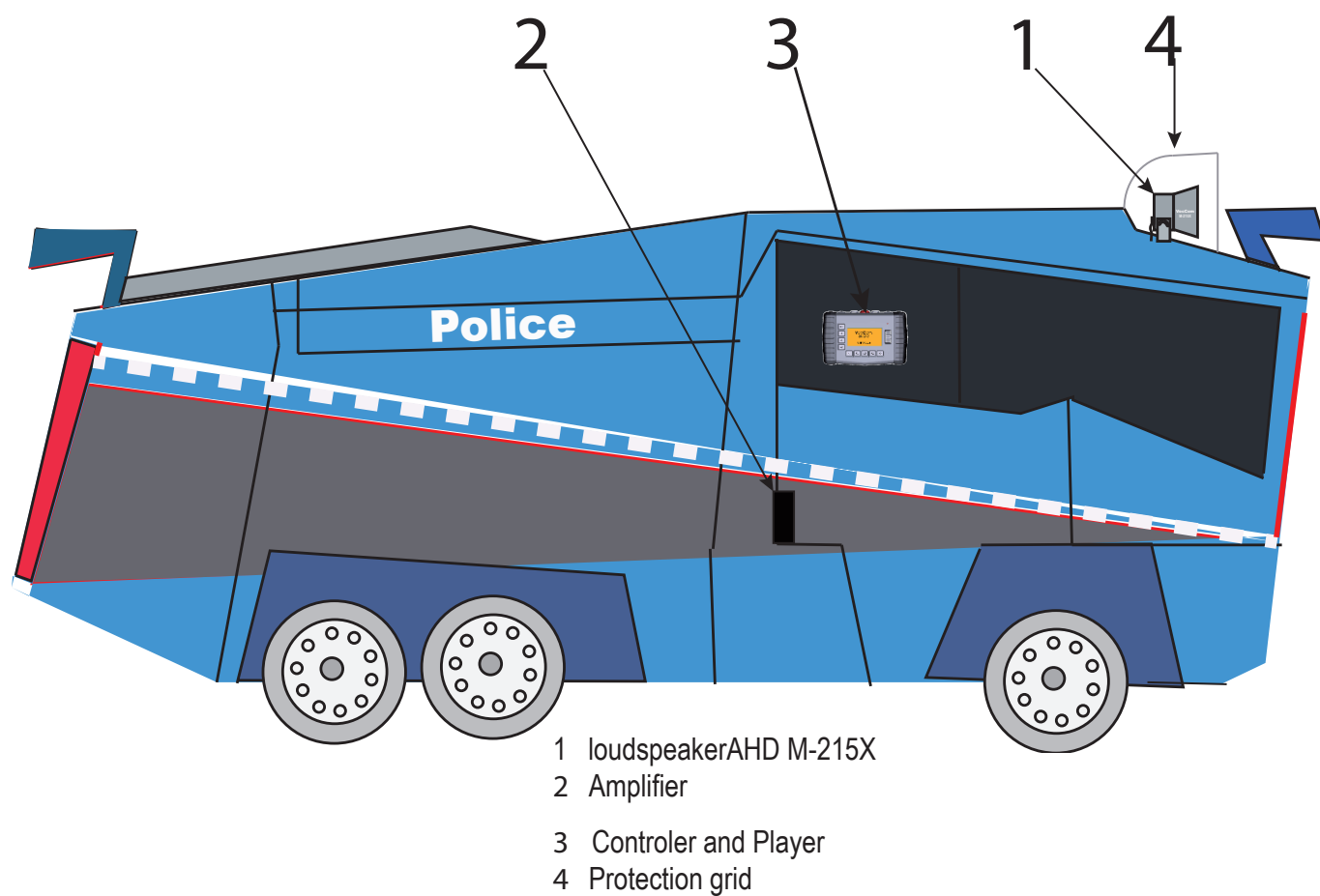
**AP-LOCK TM safety with efficient protection against misuse and accidental injury to bystanders.**

**This system was specially developed for voice transmission large areas.**

**For special applications, it is used to provide clear and understandable at a great distance.**

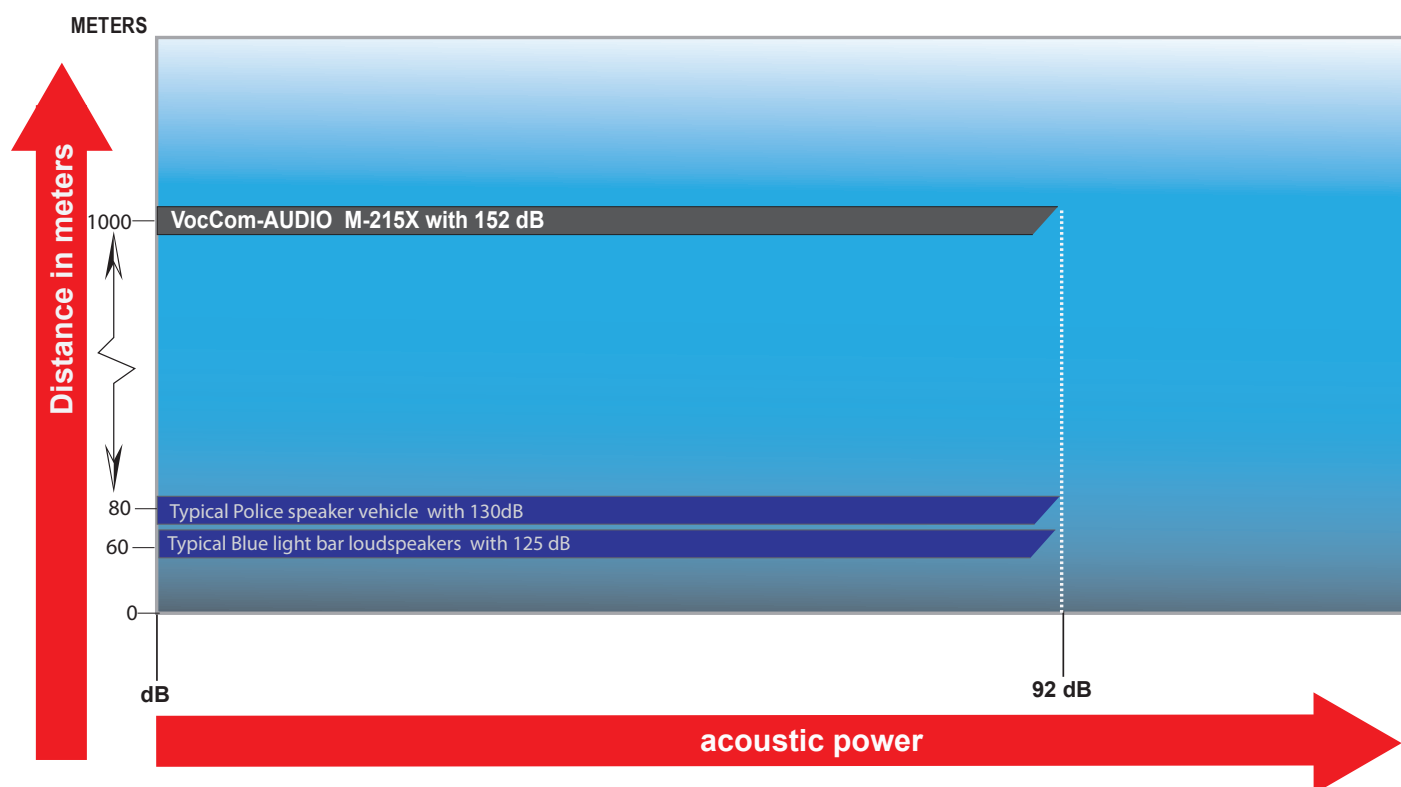
**Typical applications are:**

- *High-throughput sound reinforcement at extremely high ambient noise levels*
- Sound reinforcement of very large areas
- Sound reinforcement with ranges up to 2 KM
- Management or prevention of unrest
- Support for large-scale evacuations
- Evacuations from endangered areas
- psychological and de-escalating influence
- Scaring away up to 100 meters with 110 dB(A)
- Public announcements
- Improve the coordinations
- Achieve precise response of the target groups



## Acoustic range VOC<sup>COM</sup> M-215X

Attenuation of the sound level according to the distance law to 88 dB(A)





# The components

## AP-850 DC Amplifier

The AP-850 automotive and marine amplifier is configured specifically for the requirements of VOCCOM loudspeaker systems. The extensive DSP functions are expandable via future VOCCOM audio firmware updates. This makes the AP850 a true strategic investment for the future. The integrated DSP-controlled power amplifiers supply and protect the

high-performance loudspeakers of the VOCCOM system family. The power amplifier is available as DC version for the DC voltage range of 12 to 32 volts and as AC version with extended 90 to 240 V AC supply.

Translated with [www.DeepL.com/Translator](http://www.DeepL.com/Translator) (free version)



Model	AP-850
Montage	For mobile use
Power	4x 250 Watt
Max Peak-Power	4x 500 Watt
Control	Power amplifier DSP controlled
Voltage	DC 12* to 32 V or AC 90 - 240 V
Dimensions (HxWxD)	140 x 265 x 340 mm
Weight	5,15 KG
Temperature range	-30° C - +70° C

\* with sufficient power supply

## MP-900 Remote Control

**with option slot for battery and PR 900 protocol recorder central unit / remote control MP-900 in full rugged field design.**

The MP-900 is an audio central and remote control for the VocCom systems in the "single module usage concept". The system unit is IP65 rated and is designed for rugged outdoor use (-20° to +60°). Remote control and recorder systems have the functionality of a stand-alone audio system. A large high-contrast special display that can be switched on and off visualizes all functions even in poor visibility conditions as well

as down to -20°C. The user interface is equipped with haptic pressure points and can be operated with gloves. Can be operated remotely with cable or wireless technology, AD-Hoc recorder, MP-3 recorder / display for status indications with switchable illumination, optional AP-LOCK™ circuit, pushbutton for active/signal means, microphone and line input, volume control, on/off switch and internal as well as external power supply via DC / optional "internal rechargeable battery" and protocol recorder in the optional compartment.



Model	MP-900V
Montage	4 point mount (VESA 75 x 75)
Transmission range	3dB 20Hz to 20KHz
Connector	Mic/Line/USB
Audio-inputs	Line out /0dB
Dimensions (HxWxD)	150 x 220 x 57 mm
Voltage	DC 9 to 32 V
Weight	0,95 KG

## ML-577R - Mikrophone

### Rugged proximity microphone for ad-hoc recording with MP-900 remote control

The VocCom Microphone ML577R is specially designed for rugged use. The microphone is designed to be used as a close-talk microphone for voice and paging applications in conjunction with the MP-900 remote control. It is especially suited for mobile and fixed communications systems in high background noise environments - including military, police, fire, utility, transportation, commercial and industrial applications. Extremely feedback resistant microphone best suited for use in high background noise environments.

#### Features:

Designed with frequency response characteristics for voice communications with high quality Shure proximity microphone element, rugged AI housing, dual poles, single throw PTT button with switch for PTT record and play function.



## ML-515R - Mikrophone

### Rugged microphone for ad-hoc recording with MP-900 remote control.

The VOCCOM microphone ML515R is specially designed for rugged use. The microphone is designed for use in voice applications in conjunction with the MP-900 remote controls. It is particularly suitable for communications systems that are also intended to be used for psychologically influencing people - including military, police, fire, utility, transportation, commercial and industrial applications. Feedback-proof microphone suitable for environments with high background noise levels

#### Features:

Designed with frequency response characteristics for voice communications with high quality Shure microphone element, rugged AI housing, dual poles, single throw PTT button with switch for PTT record and play function.



## PR-900 Protocol recorder

### You speak, we document live and automatically.

Our log recorder supports you in your missions and simplifies your mission documentation considerably. To do this, it not only documents in words, levels and geo-data, but also links these in real time with Google Maps®. This makes all mission-relevant data visible. The protocol recorder, designed as a plug-in unit for your MP-900, combines three system units. These are connected internally to the MP-900. With an SD memory card up to max. 32 GB, a very robust storage medium without moving parts is used.

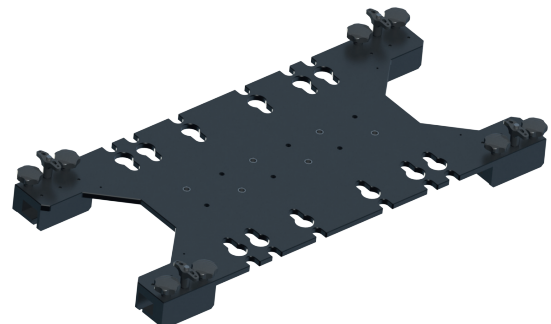
The log recorder automatically goes into recording standby when the MP-900 communicates with the power amplifier and automatically records. All data can be transferred to your PC after use with the W10 software included in the scope of delivery, evaluated and displayed graphically in a Google Maps® view.



## Rooftop mounting-Kit M-215X

VocCom speaker roof rack mounting bracket to hold max 2 pieces M-215X Consisting of a lower bracket with a modular lower crossbar. Can be used for cars, trucks and boats.

Dimensions: 825 x 440 x 48 mm  
Weight: 6 Kg  
Equipment: Thule Roof girder structures



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