

New
alphaHUD



alpha series
make sense technology



alpha Personal Network

[Modular personal monitoring and alarm system with telemetric capabilities]

MSA

Introducing the *alpha* series α

For over 100 years MSA has been changing the way people think about firefighting and personal protection equipment. For those who risk their lives to save others, the name MSA stands for technology that has dramatically improved their safety and proficiency – even as their job becomes increasingly complex.

Not long ago the engineers at MSA once again set an ambitious goal for themselves. Re-think the self-contained breathing apparatus system [SCBA]. Make it simpler. Incorporate sensible technology that significantly increases efficiency and improves the user's ability to do their job.

The results:
the amazing new *alpha* series.
Simple, sensible, smart.
alpha technology is now
incorporated into all of our
SCBA systems as both
standard and optional
features.



make sense technology at a glance...



The *alphaHUD* provides air pressure and other information at the edge of your field of vision – hands free.

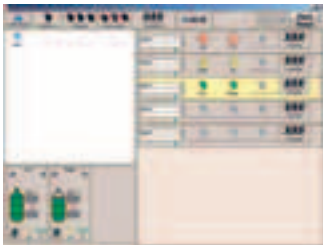
NEW



The *alphaBASE* monitors up to 24 *alphaSCOUTS* simultaneously.



The *alphaSCOUT* is a wireless, compact device that functions as hub for individual communication and monitoring.



TecBOS.solutions software powers the *alphaBASE* for sophisticated automatic monitoring.



The *alpha SingleLine* revolutionises SCBA pneumatics.



The *alphaCLICK* rapid cylinder coupling allows cylinders to be connected up to 10 times faster.

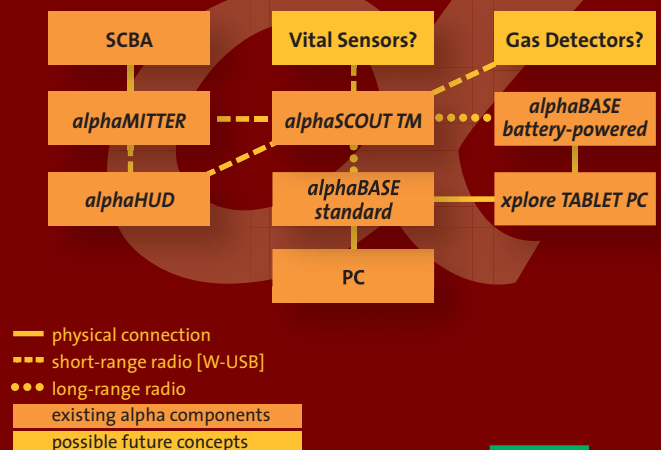
The *alpha* series begins with the SCBA pneumatic system and extends into personal monitoring and telemetry. Focusing on simplicity in design and ease of use, *alpha* technology encompasses a network of innovations that expands safety, efficiency and capability beyond that of classical SCBA systems.

The *alpha* Personal Network refers to those components that provide monitoring and telemetry. These include the *alphaMITTER*, *alphaHUD*, *alphaSCOUT* and *alphaBASE*, which are described on the following pages. For details on our SCBAs please ask for the separate brochure.

Fit for the Future

The MSA *alpha* philosophy is designed with the future in mind. Capabilities such as gas detection and the monitoring of vital bodily functions into existing *alphaSCOUT* and *alphaHUD* devices are already planned for.

Look forward to more exciting *alpha* innovations in the coming years. MSA's modular system of personal and environmental monitoring will adapt to your needs as your tasks grow.



The *alpha* Personal Network

The *alpha* Personal Network is a system of modular and wireless components that can be individually integrated to enhance your operation safety and capability as needed. A basic setup includes personal monitoring, pressure data and motion alarm. This can be extended to include telemetry and evacuation notification. Existing AirGo, AirMaXX and BD 96 SCBA systems can be upgraded to include *alpha* Personal Network capability.

Despite their technological sophistication, the *alpha* Personal Network system can be operated intuitively and is largely automated. All components are designed to withstand the kind of rough treatment that inevitably occurs in an emergency operation. They are also ATEX approved for zone 0 environments.

up to date

*alpha*MITTER

A short-range transmitter attached to the SCBA, the *alpha*MITTER sends air pressure data to the *alpha*SCOUT or *alpha*HUD once every second. It can be retrofitted to AirGo, AirMaXX and BD 96 SCBA systems with SL pneumatics.



in direct view

*alpha*HUD

NEW

Using a non-distracting LED display at the perimeter of your field of vision, the *alpha*HUD heads-up-display lets you monitor your air supply while keeping your hands free. The wireless *alpha*HUD provides pressure status and alarm information. It is easily attached to the inside of your Ultra Elite mask.

Advantages include greatly improved operational efficiency and safety. In combination with chemical protection suits, where the ability to use a hand-operated gauge is limited, *alpha*HUD is indispensable. When used in conjunction with the *alpha*SCOUT and *alpha*BASE command communication option, the *alpha*HUD can also deliver an evacuation signal.





Software

The *alphaBASE* works together with TecBOS.solutions software for automatic monitoring without the need for operator intervention. An alarm signal alerts command officers of irregularities. Complete incident data is also automatically logged and analysed, replacing time-consuming manual reports. Conventional monitoring without any radio link is possible as well.



alphaBASE

The *alphaBASE* base station communicates with all active *alphaSCOUTs* to provide complete telemetric capability. All operative personnel are monitored so that a rescue team can be sent in at the first signs of trouble. An evacuation signal can also be sent to specific teams or the entire crew.

in constant contact

by your side

alphaSCOUT

Using the *alphaSCOUT* is like having a guardian angel by your side. This handy wireless device functions as a pressure gauge, mini-computer and motion sensor/alarm combined. After receiving pressure data from the *alphaMITTER*, the *alphaSCOUT* calculates remaining service time based on your breathing rate. Should you be unable to move, an integrated sensor activates an alarm to let your team know you need help. In combination with the *alphaBASE*, the *alphaSCOUT* can also receive an evacuation notice from incident command.



alphaTAG

Each user can identify himself with the *alphaSCOUT* he is using through the *alphaTAG* identification tag. A second *alphaTAG* can be used to register the corresponding station, watch or vehicle.



TAGwriter

Individual *alphaTAGs* are programmed by the *TAGwriter*, using a convenient PC software module.



Technical details

[Long range]

The *alpha* network takes advantage of state-of-the-art, digital radio transmission. With excellent receiver sensitivity and 500 mW output power, the highly reliable signal has a range up to 4 km.

[Frequency]

866 MHz [35 cm band] provides a licence-free frequency with good penetration. The base station automatically picks a free channel.

[Polling interval]

The long-range *alpha* network polls all logged-on *alphaSCOUTs* sequentially. A complete polling cycle takes 3.4 seconds, which equals the maximum reaction time.

[Capacity]

Up to 24 *alphaSCOUTs* can be logged onto a base station. Several transmitter/receiver systems can be operated simultaneously in close proximity to one another.

[Unique signal pairing]

The wireless USB 2.4 GHz [W-USB] signal exchange between *alphaMITTER*, *alphaSCOUT* and *alphaHUD* creates a defined network around the person. Although devices are easily interchangeable, when an *alphaSCOUT* or *alphaHUD* makes contact with an *alphaMITTER*, they establish a unique signal pairing that cannot be confused by other devices in the vicinity. They can only be switched off when the system is depressurised.

[Power Supply]

alphaMITTER: 3 x AA [e.g. Duracell Plus MN 1500]

alphaSCOUT: 4 x AA [e.g. Duracell Plus MN 1500]

alphaHUD: 1 x CR2 [e.g. Panasonic Photo Power CR2 Lithium]

alphaBASE: 1 x Li-Ion; 7.2 V, 2200 mAh

Approvals

Directive 94/9/EC [ATEX]

BVS 05, ATEX E 150, Ⓢ II 1G, EEx ia IIC T3/T4

EN 50 014, EN 50 020, EN 50 284, -30 °C ≤ Ta ≤ +60 °C

Directive 89/336/EC [EMC]

EN 61 000-6-2, EN 61 000-6-3

Radio approvals according to Directive 1999/5/EC [R&TTE]

EN 302 208-1/-2, EN 300 440-1, EN 301 489-1/-3, EN 50371

Applications and Combination options

The *alpha* Personal Network components can be used in several combinations for a wide variety of applications, ranging from routine inspection work to large scale emergency first response. A few of the most popular uses are detailed below.

[SCBA Monitoring]

Keep an eye on all your crew members, even in major incidents: *alpha Personal Network* enables full telemetric monitoring of pressure, motion and other data. The *alphaBASE* can either be installed in a command vehicle or used as a hand-carried, mobile system with the battery powered *alphaBASE* mounted onto an *xplore TABLET PC*. Create your reports by mouseclick.

alphaMITTER + alphaSCOUT TM + alphaHUD + alphaBASE



[When you work alone]

Industrial plant inspection tours normally don't require respiratory protection. Nevertheless on large and complex sites it may be necessary to monitor personnel who are working alone. The combination of a standalone *alphaSCOUT TM* with an *alphaBASE* located in a supervised area is an ideal solution for this application.

alphaSCOUT TM + alphaBASE



[With chemical protection suits]

Checking pressure in a chemical suit is particularly tiresome and distracting, since you have to take your arm out of the sleeve to find the gauge. That's why professionals who need to work in chemical suits especially appreciate the added safety and efficiency provided by an *alphaMITTER* and *alphaHUD* combination. Air pressure and other vital information are monitored directly in the lower perimeter of your field of vision – hands free.

alphaMITTER + alphaHUD



NEW

alphaHUD

The wireless *alphaHUD* provides pressure status and alarm information. As a compact and lightweight unit it can be easily installed on our Ultra Elite mask in seconds. Simply push it into your mask where it fits snugly.



[At a Glance]

- Two banks of lights on the left and right of your field of vision for balanced perception
- Brightness automatically adjusts to the ambient light for non-obtrusive visibility
- LEDs glow for two seconds then gradually dim for eight seconds providing constant, non-distracting readability
- At low-pressure, a blinking alarm signal is also visible externally from both sides of the mask as a buddy light
- Display of evacuation alarm

alphaSCOUT



The *alphaSCOUT* can be clipped on or carried anywhere that is convenient for the user.

[Function]

The *alphaSCOUT* is automatically activated by turning on the cylinder valve. To pass it on to replacement personnel, simply depressurise the SCBA. The *alphaSCOUT* can now be switched off and made available for the next user. Individualised *alphaTAGs* are used to identify each new user.

[alphaSCOUT as Repeater]

Alarms are transmitted even when there is no direct radio contact. Any colleague's active *alphaSCOUT* can function as a relay station to extend the signal range. In repeater mode the *alphaSCOUT* can also be used as a stand-alone repeater. Just place a unit between a remote firefighter and the *alphaBASE* when conditions call for it.

[Features and Benefits]

- Wireless & SCBA-independent
- Significant savings through shared units
- Monitors and displays pressure, motion, remaining service time and battery status
- 25 hrs of continuous battery-powered operation
- User identification through *alphaTAG*
- Data radio module integrated in *alphaSCOUT TM* housing
- Several special functions can be activated:
 - Can act as 'telemetric motion sensor' during inspection work without SCBA
 - Can act as dedicated 'repeaterSCOUT' to extend range
 - Within 'beeper mode' responsible personnel, not located at *alphaBASE*, receive alarms of other *alphaSCOUT*



In shielded surroundings the signal of the first *alphaSCOUT* is extended by the integrated repeater of the second *alphaSCOUT*.

alphaBASE

For the base station you can choose between several sender/receivers. The *alphaBASE* standard works in combination with any PC. An external aerial with magnetic foot can optionally be used for vehicle mounted applications.

A battery-powered version of the *alphaBASE* or the *alphaBASE* standard can also be used with the *xplore TABLET PC*. The combination *alphaBASE* battery-powered and *xplore TABLET PC* allow full freedom of movement for mobile applications.

The *xplore TABLET PC* with its high computational power and its compact design is the ultimate tool for managing information on the go. The housing is extremely robust and watertight making it suitable for use in emergency service operations or other harsh environments. The high resolution screen provides good viewing in all lighting conditions, including direct sunlight.



alphaBASE standard plus PC or *xplore TABLET PC*

xplore TABLET PC with *alphaBASE* battery powered



[*alphaBASE* standard & battery powered features]

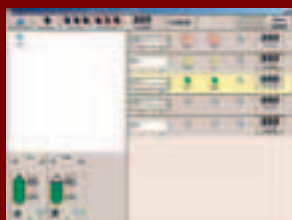
- 24 *alphaSCOUTs* can be logged onto one base station
- Real time monitoring due to fast refresh of data
- *alphaBASE* standard can be mounted in vehicles using an external aerial
- *alphaBASE* battery powered attaches to *xplore TABLET PC* for a mobile & rugged system

[*xplore TABLET PC* features]

- Extremely rugged & watertight [IP65] for use on emergency operation grounds
- High brightness display is visible in all lighting conditions, including direct sunlight
- Intel Pentium M 733 processor

Software

alphaBASE works in conjunction with TecBOS.solutions personnel monitoring software – part of the modular TecBOS.solutions safety management suite. Monitoring is completely automatic to increase process efficiency.



log on

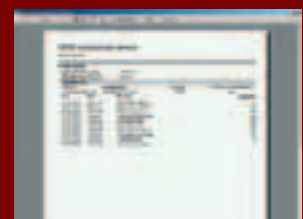


alarm

- Automatic monitoring without operator intervention
- Real-time display of personnel status for instant overview
- Automatic report generation spares valuable resources
- Distinct alarms for low pressure and motion
- Can be used for conventional monitoring without radio link
- Professional substitute to traditional accountability boards
- Integral part of modular public and private safety management software
- Centralised monitoring of multiple *alphaBASEs* linked via wireless LAN



evacuation



report

Ordering Information

10058211	<i>alphaMITTER</i> , retrofittable to AirMaXX, eXXtreme or AirGo with SingleLine [Q] [incl. support bracket for <i>alphaSCOUT</i>]
10069803	<i>alphaMITTER</i> , retrofittable to BD 96 with SingleLine [Q], [incl. support bracket for <i>alphaSCOUT</i>]
10086118	<i>alphaHUD</i> [incl. battery]
10058212	<i>alphaSCOUT</i> TM – Telemetry Modul [complete set incl. long-distance radio, batteries, <i>alphaTAG</i>]
10058213	<i>alphaSCOUT</i> [complete set incl. batteries and <i>alphaTAG</i>]
10078682	Retrofit of radio module to <i>alphaSCOUT</i>
10065874	Support bracket to attach <i>alphaSCOUT</i> [set of 10]
10065873	<i>alphaTAG</i> [set of 5]
10071717	Labels for <i>alphaTAG</i> [10 sheets of 42 labels]
10065875	<i>TAGwriter</i> [incl. USB cable]



xplore TABLET PC with *alphaBASE* battery powered

10058214	<i>alphaBASE</i> Standard [incl. power supply, direct and external aerial with magnetic foot and software]
10070795	<i>alphaBASE</i> battery powered [incl. software, 2 batteries and charger]
10068805	<i>xplore</i> TABLET PC
10076041	Set: <i>xplore</i> TABLET PC, <i>alphaBASE</i> battery powered, accessories [incl. software, 2 batteries and charger] in rugged case
10070562	Vehicle mount for <i>xplore</i> TABLET PC [incl. 12/24 V power supply]



Ultra Elite mask with integrated *alphaHUD*

All breathing apparatus related devices are approved according to EN 137, and meet EN 137:2006 [including Flame Engulfment Test].

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