



ALPHATRON
Marine



AlphaAnnounce

Public address and general alarm system

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Public Address & General Alarm

The AlphaAnnounce Digital is a DNV type approved high quality maritime Public Address and General Alarm (PAGA) system in conformity to SOLAS/IMO and IEC regulations for vessels above 500 gross tonnage and passenger vessels. This modular solution allows officers and crew to communicate through public announcements or via various alarms in case of emergency situations.

Flexible & modular

The system comprises of an 8-channel digital amplifier, a line transfer unit to supply 100V output and a back-up panel. The AlphaAnnounce can be extended from a single paging zone system to an extensive system covering several sections in a ship. By connecting units, it is possible to create a system, with as many as 64 central units and 512 speaker lines with numerous paging zones. The central unit repeats all necessary alarm and evacuation commands, which are saved directly in the message memory.

Cost of ownership

PAGA devices are a part of the ships electrical equipment and are required to perform with a long lifetime. The AlphaAnnounce is designed and manufactured to be used at full power 24/7. The efficiency of a digital amplifier is one of the key features, with minimum heat loss, saved electricity and effective secondary power supply, resulting in a longer life cycle of the system and lower Total Cost of Ownership.

Key in sound

The key role of a sound reproduction and voice evacuation system is to transmit information, sometimes in extreme circumstances. Sirens, sounders and bells do not communicate clearly what the emergency is, and that is when a spoken message is the most effective way to direct people, especially in unfamiliar spaces. The system is SOLAS certified and therefore also includes standard maritime alarm tones.

Digital amplifier

The multichannel digital amplifier is the heart of the system, which contains routines for diverse digital signal processing and the monitoring of the system operation. It has versatile analog audio inputs, effective digital signal processing circuitry and matrix, built-in prerecorded spoken message player and 8 independent digital 150W power amplifiers. When 100V speakers are used, a line transfer unit must be added to the configuration to convert 8Ω outputs to the desired line voltage of 70V or 100V.



Line transfer unit

The line transfer is a transformer unit for the public address and voice evacuation system. It converts the low impedance (8Ω) input to constant voltage outputs (70-100V). The unit is installed in between the amplifier and loudspeaker network. The unit contains 8 separate transformers and delivers 24V DC priority voltage to ensure important messages are heard everywhere regardless of the current volume settings.



Back-up unit

The back-up unit ensures communication in case of failure in the control panel or in the signal processing, using a hand held microphone and push buttons. The unit is hardwired directly to the amplifiers. It has a built-in independent message player. Messages are stored on a USB stick at the backplane. This microphone has priority over the control panel of the master system. By pushing the call button an announcement can be made in all zones at once.



AlphaAnnounce Manager

With the use of the AlphaAnnounce Manager the complete onboard system is manageable from a single place. All properties and functions for the system can be configured with this software package. A lockable sliding drawer can optionally be built into the central rack, which contains a mini laptop with pre-installed AlphaAnnounce Manager software. This allows easy configuration and maintenance. It is even possible to do remote management, configurations and maintenance when the laptop is connected to the internet, from any location worldwide.



- ✓ Import and export of configuration
- ✓ Manage all systems (or racks) through the master
- ✓ Define paging zones, locked groups and routing
- ✓ Create, edit or remove time-based events
- ✓ Alarm and evacuation functions
- ✓ Monitoring speaker line and fan speed
- ✓ Initiate pre-recorded messages

Automatic fail redundancy

To assure ship safety, two complete systems should be installed at separate locations, known as the A-B configuration. Two completely independent PAGA systems must be installed at physically separated locations. Depending on the classification society or type of vessel, it is also possible to use one system that is physically separated in an A-B configuration. The internal circuits, power supplies and alarm/tone generators are completely redundant, designed to ensure operation in case of any single failure. The AlphaAnnounce is designed and constructed like this, so it can be used in either situation.

The intelligence of the AlphaAnnounce is one of the great benefits. The amplifier can be split in two physically separated loops. If the master amplifier fails, the secondary amplifier (if installed) in the same rack or in a redundant, separate space will take over due to the buss system technology. Next to that, the back-up unit can be used as a final and last resort using the system.

Speakers

A full range 100V speakers is available to ensure clear communication in all circumstances: indoor, machinery spaces, outside and hazardous areas (ATEX).

<p>Wall speaker (ABS) Rated/max power 6/10 W 100V taps 0.75/1.5/3/6 W Weight 1.6 kg</p>	<p>Wall speaker (Wood) Rated/max power 6 W 100V taps 0.75/1.5/3/6 W Weight 1.6 kg</p>	<p>Corridor speaker (ABS) Rated/max power 6/8 W 100V taps 0.5/1.5/3/6 W Weight 0.8 kg</p>
<p>Double speaker (Aluminium) Rated/max power 10 W 100V taps 1.5/3/6/10 W Weight 1.8 kg</p>	<p>Ceiling speaker (Steel) Rated/max power 6/10 W 100V taps 0.75/1.5/3/6 W Weight 1.9 kg</p>	Fire safe dome
<p>Horn speaker (ASA) Rated/max power 10/15 W 100V taps 1/2.5/5/10 W Weight 1.1 kg</p>	<p>Horn speaker (ASA) Rated/max power 15/20 W 100V taps 2/4/7.5/15 W Weight 1.4 kg</p>	
<p>Horn speaker (Polyamide) Rated/max power 30/40 W 100V taps 3.5/7.5/15/20/30 W Weight 2.2 kg</p>	<p>Horn speaker (Polypropene) Rated/max power 50/70 W 100V taps 4.5/9/12.5/25/50 W Weight 4.1 kg</p>	
<p>Horn speaker (Aluminium) Rated/max power 8 W 100V taps 2/4/6 W Weight 2 kg</p>	ATEX compliant	<p>Horn speaker (Aluminium) Rated/max power 15 W 100V taps 2/2.6/4/7.5/10/15 W Weight 2.8 kg</p>
		ATEX compliant

Every ship is unique

The AlphaAnnounce Digital PAGA speakers can be installed in various spaces on the vessel. Cabin and non-critical areas will have standard speakers, while in the engine control room and other critical areas ATEX approved or outdoor horn speakers can be installed.

Bridge

The main control should be installed on the bridge. Speakers will be indoors, therefore ceiling speakers will be the first choice.

Engine room

The sound in the engine room is loud. Signaling is done through visual aids in combination with speaker horns.

Anchor winch

Near the anchor and mooring gear, an outdoor speaker horn could be installed for general alarms.

(Aft) deck

A general alarm must reach the crew at all times. Several locations must be equipped with outdoor horn speakers.

Control panel

The control panel is used to make announcements and control alarm messages. If system monitoring is activated, the control panel can also be used to indicate and clear system faults. An extension panel is available to extend the number of programmable push buttons for the control panel. With the extension panel, a total of 16 push panels can control the AlphaAnnounce system.

Control panel



- ✓ Gooseneck microphone
- ✓ System error indication
- ✓ Eight programmable buttons for group or alarm
- ✓ Alarm buttons protected against accidental use
- ✓ Dimmable backlight/External dimmer input
- ✓ Local speaker mute contact
- ✓ Engraved buttons

Music and sound

Our dual sound and music source can be connected to the line inputs of the amplifier and routed to different public areas while keeping a strict control of each zone. This makes it possible to simultaneously play a CD in one zone while another area listens to the radio through the FM tuner.



Radio/CD/MP3 player

The system includes a CD player with anti-shock technology, playing both audio tracks and MP3 files. Naturally a USB port and an SD/MMC slot are available. The tuner (FM 87.5-108 MHz) allows storing of up to 60 favorite and commonly used stations.

Local control

In numerous cases local input or source and volume and sound control are important for which dedicated panels were developed to be installed for easy access at remote locations. The panels can be mounted into a wall box and up to 32 control units can be connected.

The input and control unit allows local broadcasts using a microphone connected to a jack plug. Also 3 programmable function keys are available, used for example for audio input activation, call off or message start and mute of local speaker.

The volume and source unit allow source selection and adjust volume for one programmed group.



Input and control



Volume and source

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