MPA-9000 Series PA/GA System
Public Address and General Alarm System for on and offshore applications

GENERAL DESCRIPTION
Public Address System is a marine and offshore PA/GA system. The Public Address System (PA) and General Alarm System (GA) are very important in ensuring the safety of facilities and people on board. The system must be able to address emergency situations accurately and seamlessly, integrated with various other alarm systems.

In particular, this system is designed to respond precisely to emergency situations through the connection with various alarm systems. In explosion endangered areas, an explosion-proof speaker or an intrinsically safe microphone is supposed to operate.

The PA/GA system abides by the following regulations:
- b) International Maritime Organization (IMO) SOLAS
- c) Naval Safety Rules for the Classification of Ships, DNV

This system was tested at the IEC60950 standard and approved for CE by DNV. The Type Approval was done by Lloyd Register, CCS, and DNV.

System Features
- MPA-9000 Main Unit for 19" 1 Unit rack mount
- Up to 8 MPA 9000 control units connected
- Digitally programmed for priority, input and output, system diagnostic, password control
- Up to 11 emergency microphones connected
- External paging facility (from Telebell / PABX etc.)
- Prepared for A/B dual system, with alarm synchronization
- Interfaces for manual and/or automatic alarms
- Entertainment sources, with free zone selection
- Signal processing capabilities
- Configurable priority levels
- 16 speaker outputs, with unlimited amplifier expansion
- Facility for muting local loudspeaker during paging
- Overides of entertainment volumes controls during paging
- Output for activating external GA system
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- Synchronization with external GA tones
- Up to 10 different alarms in the system
- China (Hong-dong) generator
- LSC Light Signal Column (LSC) activation
- Interfaces UHF / VHF Transceiver
- Built-in audio output for peripheral device
- Muteable external alarm facility
- External general button (Zone 1 and zone 2)
- Built-in loudspeaker, to monitor activity
- Powered by 110 / 220V AC with automatic switch to 24V DC
- Overload, fault indication and amplifier monitoring
- IP Server / Speaker (Optional)

Technical Specification (Power)
1. Power Output: 4000W ~ 4.8kW
2. Frequency Characteristics: 100 ~ 10,000Hz (6dB)
3. Distortion Ratio: 5% or less
4. S/N Ratio: 30dB or higher
5. Source of Power: AC110/220V 60Hz, DC 24V
6. Power Consumption: 40A (DC) Fuse/NBR
7. Temperature and Humidity Range: -15°C ~ 55°C, 90% or less

Kind of Signal In / Out / Mute Alarm
Signal In: AL 18 (Eighteen)
1. Abandon (Muster) - Automatically operated: 1 short & 1 long alarm
2. GA, Hand & Auto - Manually operated: 6 short & 1 long alarm
3. Fire Alarm: 1500Hz, 100Hz, 0.23 sec. interval, (Alternating) sustained
4. Alarm 7 - Watch Alarm (Optional)
5. Alarm 8 - ESOS Alarm (Optional)
6. Alarm 9 - CO2 Alarm (Optional)
7. Alarm 10 - Machinery Alarm (Optional)
8. Alarm 11 - Steering Gear Alarm (Optional)
9. Alarm 12 - Bilge Alarm (Optional)
10. Alarm 13 - Engine Alarm (Optional)
11. Alarm 14 - Personal Alarm (Optional)
12. Alarm 15 - Cargo Alarm (Optional)
14. General Alarm Test
15. Fire Alarm Test

Alarm Generator Unit, AG-901
1. Rated Output (When connected to PA): Similar output as PA
2. Output Impedance: 500Ω
3. Input Level (Minimum Input level): -40 ~ -0 dBm
4. Frequency Response: 300Hz ~ 4kHz (6dB)
5. Distortion Ratio: 5% or less
6. S/N Ratio: 30dB or higher