PA/GA

Duplicated System Architecture A+B

- Highest security
- Single fault tolerant
- Fully duplicated system

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Description

Where the alarm and voice broadcast (PA/GA) system is intended to pro-vide vital life safety/ dependant instruction/warnings a fully duplicated A+B configuration is implemented. The intent is that a single fault, no matter how catastrophic, shall not inhibit the reliable distribution of alarm and voice broadcast to all potential listening positions. The duplicated PA/GA package is arranged such that there is no possibility of common mode failure and the design obviates cross transference of possible fault conditions from one sub-system to the remaining working sub-sys-tem. Each compartment is fitted with loudspeakers assigned sepa-rately to A and B PA/GA sub-systems.In areas where ambient noise exceeds 84 dBA the A and B flashing beacons should be fitted. The two sub-systems are strictly segrega-ted with central panels remotely located from each other.

Cables extending from the panels to field devices follow separate routes utilising differing transits, cable race ways, racking and tray work, ad-ditionally all cables are mechanically protected. Loudspeaker distribution is arranged such that with either A or B system isolated a minimum sig-nal to noise differential of +6 dBA is maintained at all potential listening locations and that in sleeping area a minimum of +75 dBA at the bed head is maintained.

Both A and B systems are normally on line and operate independently. There are no sharing of resources or signals. Hot-standby equipment within A or B sub-system is normally not required (unless specifically required by client). The A and B systems are held in synchronisation by an optically coupled cable A to B to A. in the event of loss or corruption of this link the worse case scenario is that alarm tones can no longer synchronise, but coverage is mantained.

Application Offshore Platform - A and B System

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