

800-2100 Hz - 111 dB at one meter in at least one 1/3 octave band

The testing intermittent time cycle is six seconds on, two seconds off, six seconds on, 106 seconds off, for a period of eight hours.

23.7.7 A bell, or other device having similar sound characteristics replacing a bell, shall produce a clear tone. The minimum sound intensity shall be the equivalent of 110 dB(A) when measured at a distance of one meter from the sound source.

23.7.8 Plastic and elastomeric materials used for functional enclosures and functional parts which are exposed to ultraviolet radiation when permanently installed shall have demonstrated their ability to withstand the exposure to ultraviolet radiation to be expected in marine service without cracking, distortion, or other degradation which will result in the appliance's failure to perform in the intended manner.

23.7.9 An assembled appliance which has been designed and recommended for outside mounting shall be capable of withstanding exposure to salt spray without failure to perform in the intended manner when tested in accordance with ASTM B117, *Method of Salt Spray (Fog) Testing*, for 200 hours, or an equivalent test, without failure.

23.7.10 An assembled appliance which has been designed and recommended for outside mounting shall be capable of withstanding the momentary drenching to which it will be subjected in normal operation without failure to perform in the intended manner.

23.7.11 Sound signal appliances, except fluorinated hydrocarbon gas containers, shall be capable of being stored at temperatures from -20°C (-4°F) to 82°C (180°F) without a permanent change which would result in the appliance's inability to perform in the intended manner.

23.7.12 Sound signal appliances, except fluorinated hydrocarbon gas containers, shall be capable of operation within a temperature range of -17°C (0°F) to 49°C (120°F) with no more than a 3 dB reduction in the sound pressure level required in A-23.7.

EXCEPTIONS to A-23.7.11 and A-23.7.12: Disposable propellant containers.

23.7.13 Sound signal appliances shall not utilize flammable propellants or fluorinated hydrocarbon gases.

23.8 **INSTALLATION**

23.8.1 Sound signal appliances shall be mounted to avoid damage by contact with other objects under normal operating conditions.

23.8.2 Installed pressurized containers shall be mounted according to the manufacturer's instructions.

23.8.3 For all vessels used in international waters and all vessels over 12 meters (39ft.) used in US inland waters, sound appliances shall be mounted with their sound pressure level directed straight ahead and the sound shall not be acoustically obstructed by fixed vessel structure or gear.

23.8.3.1 For vessels under 12 meters (39ft.) intended for operation on US inland waters, sound appliances that are permanently installed shall be mounted so as to direct the sound forward of the vessel.

23.8.3.2 The sound pressure level of a directional whistle shall be not more than 4dB below the prescribed sound pressure level on the axis at any direction in the horizontal plane within +/- 45° of the axis.

23.8.4 Electrical sound signal appliances and electrical components of non-electrical appliances shall be installed in accordance with ABYC E-11, AC and DC Electrical Systems on Boats, as applicable.

23.9 **LABELING**

23.9.1 Liquefied gas containers used as the energy source for sound signal appliances shall be labeled in accordance with applicable regulatory requirements, and when the label indicates a hazard the label shall be readable as used or installed.

23.9.2 Sound signal appliances, or the smallest container in which they are packaged, shall be labeled with or contain information indicating the correct application of the appliance by vessel length and applicable waters.

23.9.3 Each sound signal appliance shall bear, by use of a nameplate or other permanent means, in a location that is accessible without removing the appliance:

23.9.3.1 The manufacturer's name or identifying mark, and,

23.9.3.2 The mark "A-23", which shall indicate design conformance with this standard.

A-23 APPENDIX: TESTING PROCEDURES

AP-1 General Testing Requirements

AP-1.2 Sound signal appliances used in the test shall be tested at 107% of the intended nominal system voltage, measured at the appliance.

AP-1.3 The sound pressure measuring device shall be calibrated to a NIST or equivalent traceable source.