

EUROPEAN UNION DECLARATION OF CONFORMITY

To

European Council Directive on Low Voltage, **2006/95/EC**

European Council Directive on EMC, **2004/108/EC**

For

EAW, MACKIE, TAPCO, CRATE and AMPEG Branded
PASSIVE LOUDSPEAKERS - ALL



LOUD Technologies Inc.

Loud Technologies, Inc.
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USA

I. MANUFACTURER

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II. PRODUCTS

The following Loud Technologies, Inc., passive loudspeakers are fundamentally similar in operation and are subjected to the same design, testing and performance criteria as they relate to both the EMC and LVD Directives. As such, all standard and custom products produced by Loud Technologies are hereby incorporated. Active loudspeaker systems (those containing integral power amplifiers) are covered separately.

Passive Series Covered In This Declaration:

EAW Brand: ASE, AX, BH, CP, SCS, SB, DC2, FRz, JFX, KF, L, LA, LS, MK, MQ, SB, SB Cinema, SM, SMS, UB, CIS, VR, VRM, VRS, CLA, and PH.

MACKIE Brand: C200, C300z, S2xx, S4xxx (where 'x' is any alpha-numeric character).

TAPCO Brand: 69xxx (where 'x' is any alpha-numeric character).

CRATE Brand: P1xxS, SS1x, PSM1x, PSM1xP, PSM1x-I, PS1x-H, PS1x-S, PEx, PE1x, PE2xx, PExx-BK-I, UFM1x-P, UFM1x-H (where 'x' is any alpha-numeric character).

AMPEG Brand: SVT-200xx, SVT-400xx, SVT-600xx, SVT-800xx, SVT1xx, SVT2xx, PR400xx, PB200H, B100xx, B400xxx, BXT100xxx, BXT200xxx, BXT400xxx (where 'x' is any alpha-numeric character).

III. PRODUCT DESCRIPTION

For the European Union market, the above mentioned products are designated as **Passive Loudspeakers**. This class of product is an electrical-to-acoustical transducer, which receives its input signal via an insulated cable from the output of an audio amplifier, which, in turn, receives its signal from a preamplifier, mixer, processor, CD player, etc. Passive loudspeakers are not connected to AC mains power. Passive loudspeakers consist of an enclosure, a passive electrical network comprised of several resistors, capacitors and inductors, and one or more "transducers" or "drive units" (e.g. woofer, tweeter, etc.), which are permanent magnet electromagnetic motors mechanically connected to moving diaphragms.

IV. QUALITY SYSTEM

Considerable care has been taken in the design and manufacture of Loud Technologies, Inc. loudspeakers.

The product design-engineering group must approve all designs and design changes. The product design-engineering group chooses all components after testing and listening. The product design-engineering group must approve all material substitutions. Representative samples of all products are tested and evaluated by the product design-engineering group. Components are inspected and tested by the quality control group.

V. PRODUCT ENVIRONMENT

Loud Technologies, Inc. loudspeakers are intended to be used in professional sound reinforcement applications, both indoors and outdoors. Thus, the actual electrical and electromagnetic environment in which they operate is typical of that found in industrial or commercial locations. Intended users are trained and experienced in the proper setup, installation, and operation of these types of products.

VI. TECHNICAL JUSTIFICATION FOR CONFORMITY

The argument for conformity to the requirements of all applicable European Council Directives is based upon an analysis of the technical design of these products which demonstrates their **inherently benign nature**.

The design-engineering team, using commercially available drive units, develops each unique loudspeaker system design. A fully passive filter system, or crossover, is developed for the acoustical parameters of both the drive units and the enclosure. The enclosure contains all of these devices, along with the input connectors and mounting provisions.

Input connectors contain no exposed contacts when connected to an audio amplifier system. Screw terminals, when used, are provided with protective cover plates to eliminate the possibility of anyone touching the contacts when in use. "Banana" plugs/jacks are not used.

Each finished design is tested to determine the proper input power rating by connecting the system to an audio amplifier and applying broad bandwidth audio signals to the loudspeaker system at successively increasing amplitude. The loudspeaker system is over-driven until some component fails, resulting in the loudspeaker system's failure to operate properly. This is done both to determine the allowable maximum input power, as well as to verify that the system fails safely.

Pull - Testing

Loudspeakers that are intended to work as a module of a large loudspeaker group (or "array") are also pull-tested to the point of physical destruction of the enclosure to determine the limits of the suspension system. The safe working loads are then determined, based on suitable safety factors. Loudspeakers

intended to be free-standing (not hung or affixed to another structure) are verified to be stable and resist tipping in any direction, considering the various possible orientations of the product.

VII. MANUFACTURER'S DECLARATION

The undersigned hereby declares, on behalf of Loud Technologies, Inc. that the EAW, MACKIE, AMPEG and CRATE Branded products referenced in Section II above, to which this declaration relates, are in conformance with the provisions of the following European Council Directive(s), standard(s), or normative document(s):

European Council Directive on Low Voltage, **2006/95/EC**

European Council Directive on EMC, **2004/108/EC**

Copies of this Declaration of Conformity are held by the attached list of representatives located within the European Union who are authorized by Loud Technologies to operate on its behalf.

A handwritten signature in black ink that reads "Kevin Howard". The signature is written in a cursive style and is positioned above a horizontal line.

Kevin Howard
Compliance Engineering Manager
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4 August 2008