

EUROPEAN UNION DECLARATION OF CONFORMITY

European Council Directive on Electromagnetic Compatibility
89/336/EEC

for



LOUD Technologies Inc.

Loud Technologies, Inc.
16220 Wood-Red Road NE
Woodinville, WA 98072
USA

I. MANUFACTURER

Loud Technologies, Inc.
1 Main Street
Whitinsville, MA 01588-2238
USA
Telephone: 001 508 234 6158
Fax: 001 508 234 8251

II. PRODUCTS

All EAW passive loudspeakers are fundamentally similar in operation and are subjected to the same design, testing and performance criteria as they relate to the Electromagnetic Compatibility Directive. 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.

III. PRODUCT DESCRIPTION

For the European Union market, the compliant product is 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.

Passive loudspeakers include no active circuitry or feedback loops; nothing to generate RF or EMI and nothing to be impacted by RF or EMI. Any electromagnetic energy generated by the transducers themselves is limited to audio frequencies (less than 20 kHz) and confined to the magnetic “gap” within which the voice coil operates. With regard to EMC, EAW passive loudspeakers are inherently benign products.

IV. QUALITY SYSTEM

Considerable care has been taken in the design and manufacture of EAW 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

EAW 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 European Council Directive on Electromagnetic Compatibility, 89/336/EEC, is presented for EAW passive loudspeakers in any and all of their variant forms. This is based upon an analysis of the technical design of these products which demonstrates their inherently benign nature and that, as a result, they do not require compliance testing to the generic European (EN) standards for electromagnetic emissions and immunity, EN 50081-1:1992 and EN 50082-1:1997.

Since passive loudspeaker systems have low input impedance, in the range below 100 ohms, operate with input signal voltage levels of 10 to 100 volts AC, and operate in the low frequency range below 40 kHz, they are not susceptible to electromagnetic interference.

Since passive loudspeaker systems are passive devices with no active circuitry or feedback loops present in their design, these products cannot themselves generate electromagnetic disturbance.

Since passive loudspeakers reproduce only low frequency signal (below 25 kHz) as supplied by an audio amplifier, and the generated electromagnetic field is confined to the transducer's magnetic "gap", they cannot generate electromagnetic disturbance when used as part of a sound system. If the associated driving electronic equipment in the complete sound system does not emit and is not affected by electromagnetic disturbance, then the complete system will comply with the EMC Directive.

It is considered, then, on the basis of the rationale and technical justification provided, that EAW passive loudspeakers, as the benign devices described above, comply with both the spirit and the essential requirements of European Council Directive on Electromagnetic Compatibility, 89/33/EEC.

VII. MANUFACTURER'S DECLARATION

The undersigned hereby declares, on behalf of Loud Technologies, Inc. of Whitinsville, MA USA, that the EAW 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 Electromagnetic Compatibility
89/336/EEC

EN 50081-1:1992 Emissions limits for residential, commercial, and light industrial equipment (generic standard)

EN 50082-1:1997 Immunity requirements for residential, commercial, and light industrial equipment (generic standard)

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, Inc. to operate on its behalf.



Kevin Cyrus
Compliance Engineering Manager
Loud Technologies, Inc.
16220 Wood-Red Road NE
Woodinville, WA 98072
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