

ISCE

The Institute of Sound and
Communications Engineers

Engineering Note 10.3

Installation instructions

J M Woodgate *FInstSCE*

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It is important for ensuring compliance with the LVD and the EMC Directive that products which don't just stand on a shelf or the floor, but do require connecting to building wiring or other services, should be delivered with installation instructions. This isn't spelled out clearly either in the Directives or in many of the standards, but that wouldn't be accepted as an excuse. More significantly, perhaps, than the prospect of enforcement action is the real risk that if your customer has problems when installing the product, even possibly resulting in damage, he isn't likely to be a customer any more, but a thorn in your flesh instead.

Safety

It is important not to confuse *user* instructions with *installation* instructions; the latter may be used by the installer and not passed on to the user, as they should be. One of the most important matters to be included is *ventilation*. Some of you may remember a BBC *Watchdog* programme on overheating ovens. Part of the problem was that the installation instructions were very minimal, including a diagram showing the essential ventilation arrangements, which was smaller than a postage stamp! No wonder that installers often did not provide enough ventilation. Another matter to be dealt with if the equipment is to be permanently wired-in to the mains, rather than being connected by means of a mains plug, is the provision of an isolating switch *in an accessible position* and a clear statement about the rating of the fuse or circuit-breaker, whose response-time class may also need to be given.

The procedure for checking that the installation has been performed correctly must also be included.

EMC

ALL the necessary information to ensure that the installed product behaves the same as the unit used to demonstrate conformity with the Directive must be included. In particular, the types of cables to be used for *all* interconnections should be specified. This is because cables carrying only low-frequency signals nevertheless act as antennas which can radiate any radio-frequency signals that the product generates. The specification may be in the form of a specific manufacturer's type number (maybe accompanied by 'or equivalent'), or a reference to a standard designation such as RG174.

It may also be necessary to specify the style of free connector (such as 'fully screened') to be used with the cables, if the connectors are not supplied.

Functional

Don't forget purely functional matters. It is a good idea to have someone unfamiliar with the product to try to install it, with an expert on hand to *note down the questions* and to provide the answers. Then make sure that all the questions are forestalled by information in the instructions.