



Guidelines for the submission of a Technical Report for the grade of Member

Membership of the Institute of Sound, Communications and Visual Engineers in the technical grades of Technician, Senior Technician and Member is open only to those who have proved their technical competence to the Membership Committee of the Institute. The following notes are provided so that those not holding a sufficient formal qualification may demonstrate their professional standing by writing a Technical Report for submission to the Committee. The requirements for Membership also include a number of years of experience and a relevant position in the industry and these requirements must, of course, also be met.

You may submit a report for the grade of Member, in accordance with this guide, or apply to attend an informal interview.

In submitting a Technical Report, you should consider how best to convince the Committee of your technical competence. You may care to write about a project in which you were involved, research you have carried out, a piece of original theory or even a solution to a hypothetical situation. Whatever you choose, it must demonstrate that *you* are technically competent to the required level in the area of your choice, and the Report itself must be your own work. Thus it is not sufficient to simply repeat others' work or list equipment used. Naturally, the technical level of a Report intended to demonstrate qualification for Member must be substantially higher than that of a Report aimed at securing Technician membership.

For example, suppose you have chosen to describe a sound system you have designed.

To state simply 'In order to overcome the background noise a 2 kW amplifier was used' would say little about your understanding of the subject.

However if you explained that 'The background noise level was measured at 90 dBA and consisted mainly of steady machine noise. I decided that in order to maintain reasonable intelligibility (at least 0.5 STI) a sound pressure level of 104 dB would be required from the system. The loudspeaker covered the area best when placed at one end of the generator hall. The distance to the farthest listener was then 20 metres and, taking account only of the direct sound (on which the STI intelligibility theory is based), the loss over 20 metres can be predicted as $20 \lg(20) \text{ dB} = 26 \text{ dB}$. It was decided to use a type XYZ horn loudspeaker which has a sensitivity rating of 115 dB at 1 W at 1 m and a maximum power rating of 50 Watts. The line transformer was set to the 50 watt tapping and the horn therefore produces $115 + 10 \lg(50) = 132 \text{ dB}$ at 1 metre at full power input, giving $(132 - 26) = 106 \text{ dB}$ at 20 metres. This is slightly more than our 104 dB requirement, which allows for cable loss and some amplifier headroom.'

You could then go on to calculate the cable loss and possibly record the measured results you obtained on commissioning.

This would demonstrate to the committee that you understand decibels, attenuation with distance and the need to allow for cable losses and amplifier headroom.

The above is simply an example of one possible approach within one sector of the industry. It is recognised that our industry encompasses a wide range of skills and no one is likely to possess them all. However the aim of the Technical Report is to demonstrate that you are technically competent in *some* area, which is relevant to the sound, communications or visual industry. It may be electronic design of audio equipment, acoustics, system design, loudspeaker design, audio-visual etc.

Whatever approach you choose, remember that the purpose is to convince the Committee that *you* are worthy of Member grade. The work must therefore be your own and should be of sufficient length and depth (2000 to 5000 words, as a guide) to demonstrate that you thoroughly understand your chosen subject. The Committee for its part offers you every encouragement in your efforts to obtain the worthwhile goal of membership in a technical grade.