

results than the lapel microphone (no rustling shirts!) but is a little more intrusive to wear, and will be more obvious on camera.

Despite our own bias towards radio lapel microphones there are serious drawbacks to both the 'radio' and the 'lapel' aspects that should be mentioned. Regarding the radio technology, electrical interference can be a disastrous problem, particularly if it occurs during an unmonitored session (although we have never experienced this, probably because we operate in remote rural locations). Also, keeping track of the charge state of both the transmitter and receiver elements of a radio set-up is onerous (they are rather hungry); and having to stop a recording to change batteries is far from ideal.

As for the lapel design, it does entail the risk of recording noise generated by the wearer, either due to accidental microphone movement or caused by gestures involving touching the body close to the microphone (e.g. slapping the chest). The first type of risk can be reduced to some extent by careful attachment and the use of a pad and/or wind gag.

A second objection to the lapel type is simply that the recording process can be inhibited by the fact that someone must wear a piece of equipment. If the speaker is reluctant to wear a microphone or if the logistics of attaching the microphone are a problem, a solution might be found by mounting the lapel microphone on a stick as close to the speaker as possible. We feel this still provides an effective way to concentrate on one speaker (and it remains a reasonably discrete and non-threatening object, as microphones go). But of course there will be situations where it is impractical to place anything near to even a single speaker. In such a case some of the scenarios described in the next section might be appropriate.

p. 28 If only the radio aspect constitutes a problem, wired lapel microphones may be a solution. The range includes both professional, often XLR models (e.g. 'Sony ECM-4 4B') and consumer, mini-jack models (e.g. 'Sony ECM-C115' or 'ECM-T6'). The latter type is attractive for secondary or backup devices because they are very small, relatively cheap, and quite modest in their power requirements (though they do still require a battery). However, they are generally best suited to audio-only recordings because of the general requirement with video to place the camera at a distance.<sup>18</sup>

### **Recording groups of speakers.**

Documenting activities involving groups of speakers rather than recording one or two speakers may require mobility and switching between speakers or performers. Using lapel or headset microphones means that one has to commit to recording primarily one speaker (or two, if one has a microphone for each channel). If the recorded event includes a lot of verbal interaction by several people who are moving around, then a different arrangement is required. Options include 'table top' microphones (e.g. 'Sony ECM-F8') and the external microphones designed specifically for some consumer video cameras. Table top microphones work well for semi-controlled environments (i.e. indoors). Once again, consumer models are best suited for audio-only recording (because of the problems of long cables).

Regarding gear for cameras, one option is the so-called 'zoom microphone' (e.g. the 'Panasonic VW-VMS2'), a hybrid device in which the balance between directional-mono and wide-stereo input is altered as the lens is zoomed (widest lens angle equates to full stereo). While this option does not produce 'professional' audio, we found that there were situations where it worked well, allowing the camera operator to make ad hoc decisions where to focus and record, and it was definitely better than relying on the camera's inbuilt microphone.<sup>19</sup>

Quite good results can also be achieved by simply mounting one or two radio lapel microphones (or regular balanced XLR microphones with long cables) onto sticks which are either poked into the ground or held by assistants. We recommend taking a simple microphone splitter jack which allows two mono microphones to