



But as with any coincident pair of microphones, their ability to preserve the stereo image in the final mix is the contentious issue among the film post-production fraternity. In XY or MS pairs, any common signal - or signal which arrives at both microphones at the same time (in phase) - can't easily be decoded by Dolby Stereo processing in the final mix and these in-phase signals tend to collapse into the centre speaker.

There are pros and cons for all the alternatives listed above, depending on the sound track delivery requirements.

This writer is a devotee of the ORTF principal for both atmospheres and single point music recording. ORTF solves most of the problems of the other methods and can be made

into a convenient single package for location work.

This microphone configuration, named for the French national broadcasting agency, Office de Radiodiffusion-Télévision Française, was developed as a means of producing pleasing stereo while still maintaining adequate monophonic compatibility. The principal consists of two cardioid microphones angled away from each other at an included angle of 110 degrees, with the capsules separated by 17cm.

Because two directional microphones such as first order cardioids are used at this angle and spacing, the ORTF technique still provides significant intensity differences between the stereo channels. At low frequencies, the signals from the two microphones are virtually phase coherent. With minimal phase differences becoming apparent only at higher frequencies, the comb filter effects are quite tolerable, producing the pleasing 'air' around the subject.

The ORTF principal seems to satisfy all the requirements for the various release print and broadcast options, from the Dolby surround cinema epic to the mono TV in the corner of the lounge room.

Another attribute of the ORTF system for location sound recordists is that it is a 'safe'

way of recording stereo. That is to say that it is more forgiving in terms of positioning, compared to say the AB technique where finding the 'sweet spot' is critical. When going into an unknown venue with unknown acoustics to record an event without the benefit of a rehearsal, the ORTF pair can be placed almost anywhere where it sounds good by ear. The theory being that the ORTF array closely resembles the human ear spacing. The benefit here is that quite often you are not able to place the microphones exactly where you want them because they have to be out of shot or clear of audience seating in the case of a live recording.

With some minor modifications to off-the-shelf Rycote or Sennheiser shock mounts, a superior all-in-one ORTF microphone unit can be built in a convenient lightweight rig for location recording. Rycote windscreens and windjammers can be used in the normal way without compromising sound quality. Any microphone with an active cable system to the mic heads will do the trick, ie Neumann and Schoeps.

However, I prefer the DPA 4021 compact cardioids from Danish Pro Audio (DPA) because all the electronics are enclosed in the mic head and no separate preamp is required. There are five metres of fine, flexible cable between the mic and the XLR connector. The mics are first order cardioids with excellent sonic qualities and are well suited to the ORTF array.

The DPA Compacts are available in three varieties. They employ the same 19mm capsule as used in the larger studio microphones (DPA 4011 and 4012). The cable is either hard-wired to the mic (DPA4021 and 4022) or there is a version (DPA4023) which uses a Lemo connector. As with any other active cable mic, the DPA also makes an ideal bug for film sound applications - for planting in props and cars etc.

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*Many thanks to author, Rod Pascoe, and to the Newsletter of the Australian Screen Sound Guild (ASSG) 'The Heard ews' for permission to reprint this article.*

