

Holophone H4 Supermini

It's compact and tidy and represents a real-world solution to real-world multichannel acquisition issues. **ROB JAMES** tries a Supermini on for size.

The rapid rise of HDTV broadcasting and even HD for weddings and events has brought with it the requirement to produce cost-effective 5.1 surround sound.

The feature film approach, where the 5.1 track is meticulously constructed from many elements just isn't an option for many productions and, in any case, this approach won't work for live. So, the hunt is on for a practical 5.1 mic system.

If you already have strong opinions about stereo mic techniques you will find corresponding ideas in surround. The coincident and M&S camps are already well represented by the SoundField and Schoeps' double M&S system. The near-coincident, spaced mic fraternity has SPL Atmos/Brauner and any number of custom mounts for other capsules. This leaves 'dummy head' as the wild card. Dummy head has found little favour in sound for picture circles for the simple reason that, in stereo, the effect only really works well on headphones.

Physically all the Holophones are an abstract representation of a human head. The H4 is no exception but this head, a plastic, ellipsoid shaped housing with large rubber grommets mounting the five external capsules' has been subject to a serious shrinking process. It attaches to the control unit via an edge connector and two thumbscrews. The H4 arrived with a somewhat ill-fitting Velcro fastened foam windgag and a Rycote Windjammer furry cover. I had

feared that the combination of small capsules and a foam gag would be a recipe for excessive wind noise. In fact, the amount of wind it can tolerate was a pleasant surprise.

The H4 has six capsules. One points forward, two are angled left and right along the pointy bit of the ellipsoid also facing forward, and two are angled along the hemispherical part, facing backwards. The sixth LFE mic is hidden within the casing.

The control unit is housed in an alloy extruded casing with a locking hot/cold shoe mount at the bottom and the head socket at the top. The right-hand side has all the sockets. There are 3.5mm stereo jacks for the three pairs of discrete outputs and two more for the stereo Dolby encoded output and headphone output. An XLR allows connection of an alternative centre channel mic and there is a phantom power switch below with a coaxial 5V DC external power socket below that. On the back, six bi-colour LEDs, arranged to mimic the capsule layout, glow green when the signal reaches a certain level and red when clipping approaches. It takes something pretty loud to light them and then the reds come in soon after. Under the LEDs a zoom button,

duplicated on the left-hand side of the unit, alters the gain relationship in favour of the front capsules.

Beside the Zoom indicator LED lies the Mic Gain control for all capsules. Holophone advises that this should be set and left. Sound advice since it exhibits zipper noise-like steps that render it all but useless for adjustments during recording. Another knob, Ext Centre Mic, adjusts the gain of an external mic connected to the side socket. Below this is the Phones level control. A further button switches the 12dB pad into circuit. Finally, the power switch has a positive sliding action. All the buttons have associated indicator LEDs.

The manufacturer states that the H4 is intended for on-camera mounting and the primary mount is indeed a locking cold shoe type. However, I do not believe this method of mounting is its forte. The combined mic head and control unit is quite heavy at a measured 725g with 4 AA cells on board for power. The weight is only part of the problem. At around 250mm from the mount to the top, if even modest pressure is applied at the top there is considerable stress on the shoe. With smaller, lighter camcorders (Sony PD170, for example) the extra weight can unbalance the camera and I found it unwieldy.

There is a good reason for the height. Even when hand-held there is considerable scope for the cameraman's body to form an effective screen for the rear elements. On the end of a boom it's a lot of weight to hold for any length of time. The actual mic head is very light. I suspect it would be feasible to use an extension cable between the head and control unit. If



Holophone decide to offer such an accessory it would make for far better ergonomics in many circumstances.

The idea of adding an external mic for the centre channel is just fine but... This is only really acceptable when the other capsules cannot pick up significant amounts of the centre channel sound, for example, a close miked voice in a noisy environment. If they can, then the phase effects caused by the lack of co-incidence between the capsules may well be horrendous. Something similar was attempted 30 years ago when people were experimenting with M&S for TV. Somebody had the bright idea of pointing the M capsule at the action and hanging the S capsule over their shoulder to pick up the ambience. It sounded kind of OK on headphones and absolutely horrendous on speakers. And here is the danger with non-coincident mic techniques, it may well be that it is only when the post people get to hear it on speakers that phase problems become evident.

Holophone has equipped the H4 control unit with a Dolby ProLogic II encoder in addition to six discrete outputs. Full surround captured in just two channels. It's a seductive premise, but let's examine this a little more closely. The Dolby Prologic II system is primarily a phase relationship matrix and even its most ardent supporters would



not claim super accurate imaging. I have considerable reservations about using it for acquisition of material likely to be subject to manipulation in post and subsequent delivery through a broadcast chain. In these circumstances I would advocate using the discrete outputs. The headphone monitor outputs Virtual Surround but, at least with the headphones I was using, I didn't perceive much of a surround effect.

I am a huge fan of coincident mics and less than enthusiastic about dummy heads for reproduction on speakers so you won't be surprised to hear I was somewhat sceptical about the Holophone premise. In use it's a lot better than expected. It certainly manages to produce a tangible surround field with good separation while capturing the crucial main event at the front. Perhaps the relative proximity of the capsules confers some of the benefits of coincidence? I suspect that there is also some surface effect involved. Whatever, there is obviously something going on here beyond 'conventional' dummy head theory.

Handheld, on a stand or boom mounted, the H4 delivers, even in quite boisterous wind conditions. If you can set aside purist prejudices, it is a pragmatic answer to feeding the growing demand for 'real' 5.1 recordings in a variety of real-time, real-world locations. ■

PROS

Good wind resistance; light and compact head; versatile outputs.

CONS

Control unit with capsule attached heavy and ungainly with a lightweight camera; signal LED sensitivity odd; steps in mic gain control.

EXTRAS

Newly released at NAB is the H4 Multi-Cable which reduces the height of the H4 by dropping it 6-inches. It also allows the H4's encoder, preamp and monitor module to be mounted in a variety of locations. The Multi-Cable is available with 90cm or 1.5m cable, which connects the multichannel microphone head to the encoder. An upgrade to the H4 adds balanced outputs to the mic's encoder and will now have one 6-pin mini XLR output that contains LT and RT balanced information. The microphone is priced at US\$2,695.



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