

# Holophone H2 Pro

With multichannel such a happening topic and so much energy expended on its acquisition, manipulation and reproduction our options are decidedly thin for dedicated multichannel microphone systems. Then there's Holophone. **JON THORNTON** reports on a revolutionary but simple implementation that sounds great.



**I F EVER THERE WAS** a product that has been a long time in the making, it's the Holophone. The brainchild of Canadian musician and sound designer Michael Godfrey, the initial experiments and design started in 1994 with the aim of creating a compact and versatile array of microphones for recording multichannel audio. The H2 Pro is the flagship of what is now a range of products using this design philosophy.

At one level, it's quite a simple concept, and one that will be familiar to anybody who has used a dummy head to record binaurally. Using an ellipsoid shaped housing made from a dense rubber-like material, a number of omnidirectional microphone elements are placed around it, with the capsules sitting just about on the boundary of the housing. This has the effect of altering the nominal omni response of each capsule to a directional one, but with sufficient bleed between channels to ensure a smooth response between them. In addition, the spacing between the microphones introduces some inter-channel delays that approximate elements of a true HRTF. I say approximate as, unlike a conventional dummy head, the shape and size of the Holophone is nothing like a real head (*There was a boy at school who looked similar. Ed*). But despite this it is capable of some pretty impressive results.

The H2 Pro is equipped with eight capsules, all DPA 4060s, which is immediately reassuring from a

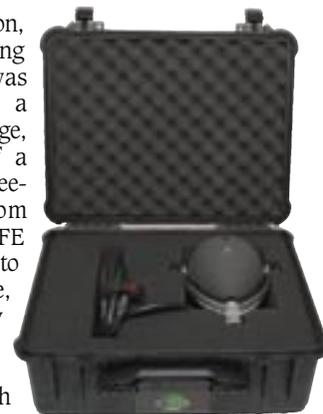
quality point of view. The pointy end of the ellipsoid carries a capsule for the centre channel, which sits forward of the left and right channel capsules very much like a miniature Decca Tree. The rear of the housing, which becomes much more spherical, carries a capsule for the left and right surround channels, along with a centre rear capsule that makes recording for 6.1 systems such as Dolby Digital EX or DTS ES possible. A seventh capsule sits on the top of the housing, meeting the requirements of the top channel employed in IMAX reproduction. The final piece of the jigsaw is a capsule mounted internally in the housing, which provides an LFE channel with a filtered response. I'm not sure whether this filtering is achieved acoustically via the absorption characteristics of the housing and the internal resonance, or electronically, or perhaps both — but in practice it provides a very useable LFE source that doesn't dominate the sound but provides a very impressive sense of depth.

The base of the housing sprouts a thick, captive umbilical cable via a sturdy looking gland and this terminates simply in a clearly labelled XLR connector per channel. The whole system is provided in a behemoth of a watertight, atmospherically sealed case, which should cope with even the harshest location environments. But while location recording is clearly one of the Holophone's intended applications, with optional accessories such as a hand-grip and wrap around windshield assembly, I was more curious to see how it performed in studio applications.

With only a 5.1 monitoring environment available for the review, I dispensed with the centre rear and top channels, and fed the remaining channels directly to their respective speaker channels via the console, with the surround monitor matrix completely flat as if mixing for DVD-A. An initial walk test around the Holophone revealed a much tighter degree of channel separation than I was expecting from such a compact arrangement, and little in the way of colouration or phase artefacts. Satisfied that all was in order, an acoustic guitar was wheeled in, with the Holophone initially set up slightly above the guitarist's head height, about five feet away and centred slightly neck-wards from the sound hole. As you might expect, this provided a lot of information about the room, with a great sense of perspective and detail in the control room, but also a very focussed front sound stage that didn't suffer from being washed out by the rears. Soloing the LFE channel for a moment revealed very little output in this particular application, but what little was there seemed to have a significant effect on the perceived 'size' of the sound in the control room.

Encouraged by this, the Holophone was moved closer to the guitar — not quite as close as a typical spot microphone position, but certainly closer than would be usual as an ambient microphone. At this stage, one shortcoming of the H2 Pro became apparent — tilting the assembly within its yoke is made difficult by that hefty umbilical cable causing an obstruction. It is possible to reverse the yoke so that you can hang the Holophone from above, but this doesn't necessarily make positioning any easier.

In this closer position, a frankly outstanding guitar sound was produced — with a super-wide front image, and a real sense of a natural sounding, three-dimensional room ambience. The LFE channel also seemed to contribute more here, resulting in a solidity and depth to the guitar tone that is normally the result of much patient microphone placement and adjustment.



Suitably impressed, the H2 Pro was placed as a kit microphone on a drum kit — slightly forward of the kick drum and just high enough to see down to the top of the skins. Tonally this was less impressive — although this had more to do with the tuning of the kit and the way it was sounding in the room than the Holophone — definitely a case of too much information here.

In all though, the H2 Pro proved to be a remarkably easy to use system that delivered consistently good results. It's not cheap (\$6000) but when you consider that the price effectively gets you eight DPA 4060s it looks a little more attractive. If this sounds a little bland in conclusion it's not meant to be — indeed it is the ease with which recordings can be made in pretty much any surround format you care to mention that impresses the most. Added to this is a separation between channels that is both clear and smooth in transition making the H2 a great solution to multichannel recording or broadcast in any application. ■

## PROS

Compact package, straightforward and easy to use; supports nearly all surround formats; good sense of perspective, balance and natural sounding ambience in recordings.

## CONS

Umbilical cable sometimes obstructs yoke, making positioning difficult at times.

## EXTRAS

The Holophone H4 SuperMini is described as the first discrete 5.1-channel camera-mountable surround microphone. Combined with an integrated multichannel preamp, monitor, and encoder, the SuperMini is based on the same patented Holophone Surround Audio capture technology.



It offers six microphone elements, a matrix encoded stereo analogue output, and six line-level analogue outputs that are available at one per channel from three stereo 3.5mm female jacks. It includes an audio zoom button that increases the forward bias of the pick-up pattern. In addition, the mic has a virtual surround headphone output with gain control, an auxiliary centre channel mic input (XLR) for attaching an external shotgun microphone, and a tri-coloured LED Holophone monitor that indicates sound level and direction.

## Contact

**HOLOPHONE, CANADA:**  
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