In Review: Holophone H4 SuperMINI

Capture the world in 5.1 with this excellent audio addition.

By Carl Mrozek

For those who haven’t done one yet, creating a 5.1 soundtrack seems daunting, including recording all the raw audio needed to do so. Any sound recordist can attest to the challenge of juggling multiple mikes, a mixer and multitrack recorder on location. While surround-sound mikes have been around for years, most
require a well-trained technician/operator for optimum results. The notion of a cameraman being able to record surround-sound audio, while also shooting, has been an impossible dream until recently, thanks to the H4 SuperMINI. Developed by Holophone of Toronto, Canada, the SuperMINI has suddenly made the impossible plausible by combining the surround-sound mike elements with Dolby Pro Logic II encoding in a compact, mobile package.

**FEATURES**

Unlike its H4 predecessor, the H4 SuperMINI, is so portable that it can readily be mounted on most pro video cameras - even 1/3” camcorders. Its unique design blends the egg-shape of its larger cousins (the H4 and H2) with a pre-amp and Dolby Pro Logic II encoder into a package the size of a thick paperback, and weighs merely a pound.

The SuperMINI’s record head has six microphone elements that mimic a standard surround-sound speaker configuration: L, R, C, LS, RS and the LFE component, which collects low-frequency signals for the subwoofer. These six separate channels feed into a Dolby Pro-Logic II encoder, housed within the SuperMINI base. The frequency response of the five visible mikes ranges from 20 Hz to 20 kHz, while the LFE element spans 20 to 100 Hz.

The magic of the SuperMINI is that it uses Dolby Pro Logic II encoding to create two stereo tracks from six discrete audio channels. These can output to cameras and stereo recorders with XLR, RCA or miniplug inputs via separate adapter cables. The twin tracks can then be connected to the stereo audio inputs on any professional video camera, audio recorder, mixer, or other gear. In addition to the stereo surround sound outputs, audio can also be taken separately from the L/R, LS/ RS, and LFE/C channels. Each channel, as well as the external center mike, the zoom feature and 12 db pad light up LEDs on the back control panel when initializing or when in operation. A single dial adjusts gain for all six channels, and there’s a separate dial for the external center mike. There’s also an on/off switch for the latter, for the Zoom function and for the -12 db pad. A second Zoom switch on the left side panel provides easy access during shoots. Both trigger the same enhanced forward bias in the center mike, whether the built-in element or an external shotgun (or handheld) mike is plugged into the center mike XLR.

The H4 SuperMINI is powered by four AA batteries housed in two compartments. Lead acid, rechargeable nicads, nickel metal hydride and lithium batteries may be used, and can power the unit for more than five hours. An AC adapter is also supplied.

Off-the-shelf headphones can be used via a stereo mini-jack to monitor the surround-sound recordings, thanks to Holophone’s Virtual Surround Monitoring. This enables real-time on-camera 3-D audio monitoring of the surround-sound field. Encoded signals can be recorded to any of a range of media and formats utilized by the camera or recorder. From there they can be imported into desktop editing programs capable of creating 5.1 sound tracks, such as Final Cut Pro, iMovie, or Vegas. The surround recordings can be imported as stereo tracks or may be decoded and edited in the original six channels using a Dolby Pro-Logic II decoder. The stereo recording can also be played through a home theatre system equipped with a Dolby Pro-Logic II, or compatible decoder. There, the six channels are separated and can be heard in their original state.

**IN USE**

I received the SuperMINI without a user’s guide, but getting started really wasn’t a problem. After loading two sets of batteries in their respective compartments I slid the unit into the coldshoe on the handle of a JVC GY-HD250 camera. The hard part was snugging down the thumbscrew with my large fingers, in the tight space beneath the SuperMINI. A well-oiled screw and a bit more room to maneuver could simplify this and help make a more secure connection. I also had to slide the tripod head’s horizontal adjusting plate backwards slightly to compensate for the added pound on the front end. The 8”-tall SuperMINI also changed my camera operation a bit, by partially blocking the line of sight for my right eye and making the camera a bit more awkward to carry by its handle.

Once mounted, there were four audio-output options for the H4 SuperMINI using adapter cables: main stereo, L /R, LC/ RS, LFE/C, as well as the headphone jack. I mostly used the ‘main stereo’ output, which mixes all six channels down to a single pair. There are separate cables with miniplug, RCA and XLR outputs. Before plugging the dual XLRs into the camera I wound the 6 foot record XLR cable around the H4 body to keep it from getting snagged while working. I also snapped the optional (but recommended) foam windscreens on the SuperMINI’s egghead for outdoor use. For headphones, I used a cheap stereo pair from Radio Shack, keeping the level in the mid-range.

Finally, I plugged an Audio-Technica AT 897 shotgun mike into the center mike (XLR) input on the side
panel for directional pickup of the prime on-camera subject. As I didn’t realize that the external center mikes was switch-activated, my initial recordings used the onboard center mikes rather than the camera’s shotgun feeding the XLR. Using the Zoom function, the forward reach of the onboard center mikes was surprisingly good. This is one reason that I didn’t notice the external mikes wasn’t activated. Holophone regards the Zoom function as important enough to justify two activation switches, one on the back panel and the other on the left side panel, for easy access while shooting. Based on preliminary testing at home, I was ready to use the SuperMINI in the field, literally. Along with other applications, I planned to use it to record wild sounds: birds, insects, frogs and mammals, which I needed for sound effects in documentaries featuring wildlife. For years, I’ve recorded wild sound with a wide assortment of mikes ranging from parabolic discs to ultra-long shotgun mikes, in both in stereo and mono. The chance to record some of the same (and also new) wild sound in 5.1 was tantalizing. In particular, I was keen to capture the intensity of the dawn chorus-the effusion of bird song that occurs around dawn during the short nesting season in the Northeast where I live.

Being able to record the singing all around me, while shooting video of some of the songbirds, has long been an ambition of mine. With the SuperMINI, I was getting the chance I’d waited for. Getting a clean recording of wild sound-free of the sounds of civilization-is one of the toughest things to do in these days of ubiquitous cars, planes, power tools and the like. Even in the heart of the Amazon there are motor boats, airplanes, dogs and people. The situation in Upstate New York is much worse. To get a few minutes of “clean” wild audio, you need to get as far from roads and houses as possible. You have to be there at dawn and hope that neighborhood roosters, peacocks, cows and dogs don’t join in on the morning chorus. Fortunately, there are some places within 50 miles or so of my home base where, with a bit of luck, this can be done, but only in brief bursts.

In early July, I set out to test the H4 SuperMINI in recording a dawn chorus on the edge of state and federal wildlands near Batavia, N.Y. I had a late start on my first attempt, as the sun was already peeking through the trees and the bird’s song intensity was subsiding. People and other animals were awakening and I was lucky to get one to two minutes of relatively clean wild sound between interruptions. To help overcome some of this, I used the Zoom function, with a standard shotgun mike plugged into the center input and got as close as possible to the loudest and most persistent pockets of bird song. Whenever possible, I tried to immerse myself in the chorus so that I could make good use of all six channels. This helped reduce the interference from extraneous sounds such as distant barking dogs and mooing cows, but did little to screen out passing cars or airplanes. When these interfered, I simply had to pause and wait until they passed and faded away.

A bigger problem was learning to record and adjust the SuperMINI and or camera, without incidental noises interfering. These came from simply touching the gear or my clothes, and also included simple sounds that are usually ignored such as a grunt, sniffle, or those produced from swatting a biting fly or mosquito. Even slight nearby sounds are picked up much better in an omnidirectional recording environment than when recording with two fairly directional mikes. One option was using only the output of a pair of mikes, as opposed to taking output from all six channels). The best results came when using the forward facing L/R mikes. Another trick for minimizing this unwanted pickup was to adjust levels on the H4-instead of using camera level controls-while monitoring the input to the camera. While the results were not as interesting as with the H4’s Virtual Surround monitoring, this produced less “handling noise.”

With practice, and by using a tripod whenever possible, my recordings with the SuperMINI improved steadily. Ultimately, I got some fairly satisfying audio sequences of dawn choruses, and also at night of insect choruses-mostly from crickets and katydids. Next on my list of sounds to be captured are various owls, coyotes, foxes. Next spring I’ll be going after multiple frog choruses. I am hoping that by then someone will have designed a custom-fitting fuzzy windsock for the SuperMINI so that it can perform well in moderate winds. The more wind, the less trouble with those pesky civilized noises!

**SUMMARY**

Holophone’s H4 SuperMINI is a well designed portable surround-sound recording system contained in a very compact and rugged package. This pickup and encoding device makes it feasible for a cameraman do double duty as a surround-sound recordist, at least under ideal conditions. Getting clean and usable surround recordings in the field, particularly outdoors, is fraught with challenges, but with the SuperMINI it can now be done by a mini crew-one person, if necessary. With a bit of skill and under the right conditions, it enables the capture of rich three-dimensional recordings that provide unity of time and place, with high quality matching ambient audio. This should be of considerable value to pros of many stripes, whether in shooting independent features, documentaries, reality TV programs, music videos or special events. Virtually any pro that needs to create 5.1 tracks now has a tool to make it easier to do so at the same time the video is captured. If the budget won’t accommodate a separate soundperson, the videographer now has the tool needed to wear two hats effectively.
HOLOPHONE H4 SuperMINI

www.holophone.com

$2,495 (Includes case, windscreen, AC adapter and cables.)

DV Score:

Pros:
Compact size, rugged, lightweight, provision for use with external mikes..

Cons:
Changes balance of camera, partially blocks view.

Bottom Line:
Of considerable value to pros of many stripes.

What the ratings mean

| Excellent! A score of 4.5 or better earns an Award of Excellence. | Very good. | Solid choice. | Almost. | Don’t bother. |

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