

MicW i436 & i825

Pressing your handy into service as a recorder starts with a better mic. **NIGEL JOPSON** looks at an omni mini and lavalier.



The consumer mobile phones we carry in our pockets are better and more flexible field recording devices than many of the professional products we humped around when tape and recordable discs were the storage media. The quality problem with cell phones is on the input side — in *Resolution* V9.7 we looked at recording solutions for Apple's products that make use of the stereo line in available via a dock connector. But when the Electronic News Gatherer pops out to the shops for some coffee and finds herself in the midst of a record-worthy urban riot, will she have remembered to pack the half-a-cellphone sized dock-input device? Chinese manufacturer MicW has come up with some external microphones so tiny they take up less space than a couple of coins, could easily be permanently packed in a wallet or key-holder, and which make use of the headset input of the iPhone.

The two mini-mics reviewed are fitted with TRRS 3.5mm 4-pole headset connectors, wired as per the iPhone: ground connection on the second Ring and mic positive on the Sleeve. Several smartphone brands use the same wiring, with the notable exception of Nokia, who reverse these two connections. Fortunately, cheap adaptors are available on Amazon, so I was able to test the MicWs on an iPhone 3, iPhone 4, iPod Touch(2g), Nokia 5800, laptops with mic inputs and with a Canon 5D MkII DSLR camera. Breakout cables — intended for using phone headsets for Skype on PCs — mean these microphones are not restricted to mobile phone use: I used the MicWs on a variety of devices with normal 3.5mm stereo mic inputs with PIP (the mics are electret condensers and require plug-in-power). Unfortunately the iPhone headset input has a steep high-pass filter: -20dB at 100Hz and -50dB at 50Hz. In most of the later iPhone models there's also a limiter although, with the recent iOS 5 upgrade, Apple has added an audio session category called 'Measurement' that disables the limiter and adds gain control — the App used for recording or measurement would need to be a recent version coded to take advantage of this new operating system feature.

MicW is a member of BSWA Technology Ltd a company founded in 1998 as a joint venture between the Chinese Academy of Sciences and a group of sound engineers looking to market affordable measurement microphones. The diminutive i436 itself complies with the IEC61672 Class 2 and ANSI S1.4 standards, but if the intention is to use it with one of the many audio

have specific compensation curve presets for the MicW i436, i456 and i266 built-in to their RTA and SPL meter applications.

I tested the i436 mainly from the point of view of music, ENG and field recording. The diminutive omni has an admirably flat frequency response from 20Hz up, with a very small, slightly flattering boost of around 2dB at 12kHz. The overall sound is extremely neutral, with a slight directional effect above about 4kHz, as might be expected from any small diaphragm omni. With a sensitivity of -44dB (6.3mV/Pa) the i436 has less gain than the iPhone 4s built-in mic, making it ideal for recording music or high volume sound effects that would normally trigger the iPhone built-in limiter, and would challenge headset input circuitry. I would not recommend the i436 for capturing ambient sounds like distant birdsong, because the signal-to-noise ratio is too low on resulting recordings. For ENG use, where the iPhone will be thrust towards an interviewee's mouth, I don't believe the i436 offers a particular advantage over the iPhone 4 built-in mic. The iPhone 4 internal mic has more gain, is of reasonable quality and sounds pretty consistent between phones: many App developers have optimised their reportage-style recorders to take advantage of it. The i436 is, however, of noticeably better quality than the iPhone 3GS built-in mic, is a welcome addition to an iPod, and puts the ropey Nokia built-in mics to shame.

It was when I tried the i436 direct into a DAW on a laptop that its audio quality became really evident. This omni has a very rich and smooth sounding low end — evident even with a budget laptop preamp — and an artistically useful proximity effect. On acoustic guitar the i436 delivered a far more useable sound than many large-diaphragm studio condensers, it gave a very natural sound with a saxophone, and I suspect would do particularly well on cello or double bass. An unexpectedly useful little recording mic, which could also give service with a careful vocalist if fitted with a pop-shield.

The i825 is an omnidirectional electret condenser lavalier, the version we tested came with a comprehensive accessory kit containing various foam windshields, a tie clip, sticky pads of different colours and an adapter to allow headphone monitoring from the iPhone while recording. To make use of the headphone adapter, the particular App in use must have input monitoring coded as a feature: the Sonoma

measurement Apps now available for iDevices, it's worth ensuring the App developers offer a calibration facility. Studio Six Digital, makers of a popular iPhone RTA App, unfortunately state: 'we can't recommend any mic that plugs into the headset connector, such as MicW.' On the other hand, developers DSP mobile

Wire Works FourTrack (£2.99) has it enabled, for example, while the free Apple Voice Memo App does not. The i825 lavalier has a gentle bass roll-off and a pronounced presence lift — a peak boost of around 5dB at 8kHz. This is a particularly small and concealable lavalier: the body is 3mm in diameter and less than 10mm long, the grey cable is extremely thin, with three useful plastic sections of increased thickness for slotting onto the tie-clip.

I experimented with different placements and found the microphone quite immune to changes in tonality relating to position. When taped to a forehead, clipped to a shirt or aimed directly at the speaker's mouth the i825 maintains an extremely uniform tone, provided a similar speaking distance is maintained. The i825 is not susceptible, as so many lavaliers unfortunately are, to drastic changes in tone due to clothing or head movement. The sub-miniature i825 proved capably resistant to overload from shouting and singing. This is the ideal device to use where the opportunity exists to clip a microphone to an interviewee's clothing and, being an omni, the interviewer's voice is adequately audible when this is the only mic in use. However, in very ambient environments, I believe the i855 cardioid version of this microphone would be a better option, as the sound from the i825 can get splashy in a reverberant environment.

This lavalier is particularly suitable for use with DSLR video recording for 'run and gun' interviews, as there's sufficient cable to mount the mic properly and also maintain a reasonable focus distance with the camera. When used with the Canon 5D via an adaptor cable, there was a huge subjective improvement in audio quality over the internal camera mic. Despite the HF boost, the microphone has a fairly neutral character when compared to other lavalier types: there's noticeably less bass boost and colouration than with the popular Audio Technica MT830mW Miniature Omni lavalier, for example. A miniature mic like this is ideally suited to unorthodox recording by lowering into sound holes on instruments and suchlike, and the i825 proved its worth in this respect, with the uniform pickup tonality being a distinct advantage. ■

PROS

The i436's diminutive size belies its relative quality as a recording tool; its flat bass response is an asset somewhat wasted on the iPhone headset input; the i825 can dramatically improve the quality of an AV interview using iPhone or DSLR.

CONS

i436 not the optimum solution for casual recording tasks such as lectures or conferences; i436 more useful to audio pros who understand its abilities and limitations; i825 needs careful treatment to avoid cable damage.

EXTRAS

Similar in size to the i436, the i266 High-Sensitivity (-40dB 10mv/Pa) cardioid is more suited to reportage-style recording with the iPhone. The MicW accessories pack contains windshields, adaptors for laptop use and headphone monitoring, and an aluminium carrying case/mount that allows you to mount your microphone on a mini tripod or microphone stand.

Contact

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