

TECHUPDATE

SONIFEX PUTS DSP INTO HYBRID

Sonifex has been selling telephone hybrids internationally since 1986. There are two series: the analog-based HY-03 range offering typically 30 dB of rejection, and the DSP-based DHY-03 unit with a rejection ratio of between 70 dB and 80 dB, which Sonifex says is the best rejection rate possible using POTS telephone lines and hybrid technology.

The DHY-03 telephone hybrid has excellent impedance matching between the central exchange and the hybrid. It can cope with impedances from many foreign exchanges and some digital exchanges, often used in modern telephony systems. The company says there is a calibration routine that can detect and match to the line impedance to which it is connected. The unit conditions the electrical interface between the hybrid and the communications network, e.g. maximum signal levels, line current limits, ringing conditions, etc. The unit has embedded international country settings for telephony impedance and conditions and these values can be preset if it is known where the unit is going to be installed.

Two echo cancellation routines run using internal memory allowing echo cancellation to 127 ms and improved distortion of other mixed signals. This improves the hybrid's ability to take calls on mobile phones, or where there are other delays, for example, on satellite and conference calls. It can also recall signals from its memory buffer and allow for these delays without



impairing performance.

In addition to echo cancellation across the network the DHY-03 is able to perform local acoustic echo cancellation. This is used when there is feedback from the audio output to the audio input, usually due to the output being sent to speakers and being picked up by a microphone input. It is able to perform an echo cancellation algorithm on the return signal and subtract the content due to the original caller from the signal sent to the line.

The DHY-03 has serial control of dialing and of the configuration parameters. These can be accessed with free control software available on the Sonifex Web site.

The feature set includes a balanced mic/line input and a balanced line output from and to the mixer, with input and output gain adjustment from and to the telephone line respectively and input and output metering of these signals. Users can switch from local to remote line hold either by using the front-panel push button, by serial connection or by using a GPI remote input, usually connected to the on-air mixer.

In addition, it also has a conferencing facility, integrated auto-answer, automatic call disconnection, auto-ducking and DTMF tone recognition.

For information, contact Sonifex/Independent Audio at (207) 773-2424 or visit www.independentaudio.com or www.sonifex.co.uk.