

# Radio World®

USER REPORT

Reprinted from September 1, 2001

## Zephyr Goes To Xstreams

Stephen Kirsch  
Owner, Silver Lake Audio

ROCKVILLE CENTRE, N.Y. The popular **Telos Systems** Zephyr ISDN digital transceiver has a fresh new look.

Telos has introduced the Zephyr Xstream, a family of codecs with features comparable its popular Zephyr 9200 and ZephyrExpress 9302 codecs.

It is offered in three versions, a standard 2RU rackmount and two models with integrated four-channel mixer and headphone amp. Mixer units are available as rackmount or portable.

### Maintaining familiarity

Since the mid-1990s, the keys to the success of the Zephyr have been versatility and user-friendliness. Telos may have strayed from this path with the Zephyr Express, a portable codec that was a bit too confusing for average users to operate confidently.

But with the Zephyr Xstream, the objective clearly was to maintain the familiarity of the classic Zephyr, while introducing features that reflect advances in codec technology.

Our experience in the rental business has taught us that most customers are not interested in reading the manuals that accompany the gear we provide. So we, too, introduced ourselves to the non-mixer version of the Zephyr Xstream by opening the box and powering it up.

The front panel is straightforward, with send and receive meter strings, synchronization and line status LEDs, an LCD display and various keypad functions. Access to the most common set-up menus is through four short-cut buttons.

### Low delay

New in this unit is MPEG 2 AAC, an algorithm standardized by ISO/MPEG in



Telos Zephyr Xstream Codecs

1997. Telos says it offers more coding power than Layer II or Layer III, for superior audio quality at lower bit rates and with less delay, about 172 msec.

The AAC-LD low-delay mode further reduces the delay to 56 msec, more than 75 percent less than MPEG Layer III. A trade-off in this mode is the presence of slightly perceptible coding artifacts, comparable to the quality seen in Layer III.

Another welcome feature of the Xstream is the auto-receive mode. Within seconds of connection, the decoder determines the incoming settings and adjusts itself accordingly.

Telos has added new line status messages. These are important diagnostic tools when problems arise, giving details about ISDN line connection as well as incoming and outgoing call progression.

An enhanced autodial section allows users to store profiles for various destinations. A new location feature allows programming of information needed for use in more than one venue, including SPID numbers.

Digital AES/EBU I/Os are standard in non-mixer versions, and there is a new Ethernet 10base-T port for command

controls or TCP/IP connection for FTP transfer of Telos software updates.

### All in one

With a four-input mixer and headphone amplifier, the Xstream MX and MXP versions are all-in-one boxes for ISDN remote broadcasts. The "portable" unit is, however, about the same size and weight as the rackmount version, with the addition of rubberized panels on the top and bottom.

Gain on each input is menu-controlled and is selectable as one of two microphone levels, or professional or consumer line level. In addition, it is possible to assign each input to channel A, B or both via a front-panel switch.

An audio processing option for each channel is via menu controls. Four choices of processing provide degrees of AGC and limiting. Software functions such as panning and low-cut filtering are available.

The monitor section features four stereo headphone outputs and two XLR outputs, with two software-controllable monitor mixes.

Front-panel pushbutton switches allow for monitoring of send, receive or both. The Monitor 1 mix features a single headphone output and volume control, both front-panel mounted. Monitor 2 is routed to three rear headphone jacks. In addition, the rear-mounted XLR outputs are controlled by the Monitor 2 mix.

It seems to me that there are too many outputs assigned to Monitor 2, and not enough to Monitor 1. But this is a subjective issue related to how the individual broadcaster intends to use the codec.

For information contact Telos Systems in Ohio at (216) 241-7225 or visit [www.telos-systems.com](http://www.telos-systems.com).