Radio World
The Newspaper for Radio Managers and Engineers
REPRINTED FROM AUGUST 3, 2005 WWW.RWONLINE.COM

USER REPORT

Telos Xstream Expands on Classic

Xstream and Xport Audio Codecs Add Features, Functionality to Classic Zephyr Model

by Mike Schweizer
Project Manager
Improbable Missions Force

SAN FRANCISCO Sitting down to write this user report was tough. The problem is that the Zephyr Xstream audio codec from **Telos Systems** is one of my favorite pieces of equipment, and I didn't know where to start, as the box can be used in many ways.

Let's start with the obvious application, the basic remote broadcast. Instead of lugging a mixer, a headphone amp, mic processing, a telephone and a codec I simply bring my mixer version Xstream. I send high-quality audio to the studios on one ISDN channel (the Xstream offers more coding modes than the Classic Zephyr and other ISDN codecs) and use the second channel to communicate with the studios.

With four inputs that accommodate mic- or line-level signals, I just plug in mics or wireless receivers and go.

The four built-in headphone amps deliver plenty of volume, even pleasing talent who blew their hearing years ago. Two monitor mixers allow me to construct the "mix-plus" for the talent and PA right in the Xstream.

The ability to do so much in one box is handy when I have limited space in which to set up, or have to hand carry the gear a long way. It also eases getting through security when covering events such as the recent address by Secretary of State Condoleeza Rice in San Francisco.

Telos also makes a rack-mount non-mixer version of the Xstream with one set of line-level analog inputs and outputs. AES/EBU is standard on this configuration. This unit is ideal for installation at the studio end at a significantly lower cost than the mixer version.

New tricks

Another improvement over the Classic Zephyr is the ability to run high-bit-rate transmission in some coding modes via an optional V.35 or X.21 interface. I was recently involved in setting up telecom for a broadcaster in San Francisco who had begun a new LMA on short notice.

We had a T1 installed for the STL, and Intraplex multiplexers were on order, but it would be a few weeks before they arrived. Using Adtran TSU-100 T1 CSUs we connected a pair of Zephyr Xstreams to the T1 and ran them in Layer 2 Stereo at 384 kbps on a single V.35 interface. It sounded great, the coding delay was minimal and we saved a long dual-channel toll call. ISDN was available as backup utilizing the same hardware.

When you install a Zephyr Xstream, you also get half of a great POTS codec system. Telos Systems makes a unit called the Zephyr Xport, which uses a high-speed analog modem to connect to an Xstream. Because the Xstream uses an ISDN line, calls are digital from the originating CO all the way to the studios in most cases. This is similar to the situation with 56k dialup modems; they can talk to the ISP's digital trunking at high bit rates, but if you try to use one to call another on analog phone lines, the best you can do is 33.6.

Four built-in headphone amps deliver plenty of volume, even pleasing talent who blew their hearing years ago.

I carry an Xport when doing remotes for stations that are using Xstreams. Last year we were busy and didn't check an ISDN line in advance of a broadcast. The site was a long drive away, and we had been having great success in getting ISDN from SBC that worked every time. Big mistake. I arrived at the pizza joint

two hours before airtime and couldn't find the line. Seems it was installed at another address by mistake.

The restaurant was so small it only had two phone lines, one for reservations and the other for credit card verification. But it turned out they also had a privately owned pay phone in the lobby. The radio station in question has "800" numbers pointing at several of the Xstreams to avoid having to register remote lines with long-distance carriers. We hijacked the pay phone line, connected the Xport and got the show on the air via the "800" number while we waited for the phone company to reroute the ISDN to our location.

Another advantage of the Xport/Xstream combination, not so obvious, is that the board operator didn't have to reconfigure anything to receive our POTS codec call. We just showed up on the regular console input with audio quality almost, but not quite, as good as with ISDN. Incidentally, the Xport also can be optioned for mono use with ISDN lines, making it suitable for users on a tight equipment budget.

I was covering a city council meeting on a controversial issue. It was a last-minute thing, so I used the Xport on an awful phone line furnished by the city. Just as the mayor arrived to be interviewed, the modems gave up on the horrible line. The system failed back to the Xport's hybrid mode and the interview was on the air, although you could hear the ticks and pops that had given the modems fits. Had I been using another product, that interview would have been lost.

Both the Xstream and the Xport can be remotely configured and controlled via a Web browser, which opens up numerous possibilities for unattended operation and remote tech support. The Xstream also can be used to transmit and receive audio via IP streaming.

For more information, including pricing, contact Telos in Cleveland at (216) 241-7225 or visit www.telos-systems.com.