

Hx6 Six-Line POTS Talkshow System Give Your Phones an Instant Upgrade



OVERVIEW

Hx6 is our most advanced six-line digital Talkshow system. It features two high-performance digital hybrids and includes our famous Digital Dynamic EQ, noise gate, caller ducking, and acoustic echo cancellation. Works with POTS analog phone lines. Single-cable Ethernet hookup via Axia[®] Livewire[®] I/O, or choice of analog or AES/EBU I/O with one input and one output per hybrid, and one Program On-Hold input. Includes complimentary XScreen call-screening software from Broadcast Bionics.

FEATURES

- Six-line capacity; works with POTS (analog) phone lines.
- Our most advanced digital hybrids, with DSP algorithms optimized for superior performance with today's wide variety of far-end call types (VoIP, cell, POTS, app-based).
- Telos® DDEQ (Digital Dynamic EQ) and adjustable smart-level AGC ensure spectrally consistent audio from call to call — even on notoriously tough cellular calls.
- Excellent trans-hybrid loss of >55dB.
- Smooth, proven, symmetrical wide-range AGC by the audio processing experts at Omnia®.
- Studio adaptation and a subtle, inaudible pitch shifter to prevent feedback in open-speaker studio environments.
- A sophisticated caller override that improves performance and allows precision adjustment of the degree to which talent audio “ducks” the caller audio.
- Striking Telos VSet6 six-line phone controllers with large, colorful VGA LCD displays that provide intuitive operation and setup. Telos-exclusive Status Symbols provide producers and talent with animated, high-contrast icons that communicate line and caller status at a glance.
- Caller ID displayed on the VSet6 phoneset and the included XScreen call-screening application.
- Livewire IP-Audio allows fast, one-cable integration with Axia networks, and provides Axia board operators with seamless, on-console control of multiple lines and hybrids. Standard Ethernet backbone provides a common transport path for both studio audio and telecom needs, resulting in cost savings and a simplified studio infrastructure.
- Choice of standard Analog I/O or optional, extra-cost AES/EBU I/O.
- Easy setup and configuration via Ethernet using any PC and your favorite Web browser.
- XScreen call-screening software from Broadcast Bionics, provided at no cost.

IN DEPTH

Advanced caller management and superior sound

Say hello to Hx6, the most advanced six-line broadcast phone system Telos has ever made. Thanks to its Telos DSP hybrids and a full suite of audio processing capabilities, an Hx6 in your studio is like an instant audio upgrade for on-air phone calls — song requests, morning show phoners, or call-intensive talk shows.

Hx6 works with POTS phone lines, and comes equipped with two advanced telephone hybrids (each with its own independent AGC, noise gate, and caller override dynamics) for high-quality conferencing — the same advanced DSP technology used in the best-selling Telos Hx1 and Hx2 telephone hybrids.

The DSP toolkit in Hx6 is full-featured, to say the least. Telos Digital Dynamic EQ, our renowned adaptive 3-band processor, analyzes and adjusts received audio spectral characteristics so that calls sound smooth and consistent despite today's wide variety of phone sets and connection types. Adjustable Omnia smart-level AGC with noise gating provides spectrally consistent audio from call to call — even on notoriously tough cellular calls. A sophisticated caller override allows precision adjustment of the degree to which talent audio "ducks" the caller audio, and exclusive feedback reduction functions help eliminate open-speaker howl.



Like all Telos talkshow systems, the Hx6 front panel is simple and informative, with separate send and receive meters for each hybrid, a Program-On-Hold audio presence indicator, a high-resolution OLED display for setup, and navigation keys for quick adjustments.

Hx6 | Give Your Phones an Instant Upgrade



Around back, you'll find audio I/O, GPIO, and Telco connections. Hx6 connects directly to 6 POTS lines. Separate analog or optional AES digital I/O is provided for each hybrid, as well as a Program-On-Hold input, GPIO connections for speaker muting, ring tallies, et cetera.

There's also an Ethernet port. This provides connection of as many as six Telos VSet phones, but that's not all: It's also an Axia Livewire port. Through that jack, Hx6 puts audio, hybrid control, and mix-minus for all six phone lines onto one single skinny CAT-5 cable. Livewire setup is simple: Plug it into your Axia network, do some fast web-based configuration, and your talent can control Hx6 directly from an Axia mixing console equipped with Call Controller modules. The Ethernet connection also allows for convenient remote setup and administration.

With all of these capabilities, you'd expect Hx6 to cost twice as much — but it doesn't. In fact, you can have an Hx6 for about what you'd pay for some other companies' "premium" systems.

Intuitive, easy-to-use controllers



This is the Telos VSet6 six-line phone controller, an IP-based phoneset with a large, high-contrast color LCD panel that provides line status and caller information. There's almost no learning curve; VSet phones work like traditional Telos controllers, with calls selected, held, and dropped in the way to which operators have grown accustomed. Exclusive animated Telos Status Symbol icons show line and caller status at a glance; easy VSet controls let talent manage incoming lines, lock calls on-air, start an external recording device, and take a queue of calls to air sequentially, for precise management of multi-call interviews or conferences. Next Call functionality speeds workflow for producers, screeners, and talent. The LCD display delivers detailed line status, caller information, caller ID, time ringing-in or on-hold, and even comments entered in the included Xscreen screening software. A built-in address book and call history log round out VSet6's features. And, just like the Hx6 itself, each VSet6 has its own web server for easy remote configuration and software upgrades.

Axia On-Console Control



Hx6 works with any brand of broadcast console. But wouldn't it be great if talent could take control of phones without ever having to divert their attention from the board? Whether your shows consist of live calls or pre-recorded interviews, phone segments are usually fast-paced with little room for error. But traditionally, the phone system was separate from the on-air console, making it hard to use both together efficiently, leading engineers and talent to ask: "Why can't the console and the phone system work together?"

Now, they can. Hx6 can connect directly to Axia mixing consoles using Livewire IP-Audio to eliminate the cost and complexity of old-style inputs, outputs, and mix-minuses. IP-Audio networking technology provides the ideal way to integrate broadcast phones into the on-air console — the control center of every studio. Users enjoy seamless console integration, with phone controls right on the board so that talent can dial, answer, screen, and drop calls without ever diverting their attention from the console. Information about line and caller status can be displayed right on the console as well.

There are plenty of other advantages to melding phones with consoles. Like ease of installation: IP-Audio consoles with built-in phone controllers don't need any additional wires or connections. Their control signaling, caller audio, and backfeeds ride on the network connection that's already there. Bringing caller audio into the IP-Audio domain makes it routable like any other audio source. And since the console now communicates directly with the phone hybrid, mundane tasks such as mix-minus generation, starting recording devices, and playback of recorded off-air conversations can all be automated. All of which means faster, more precise phone segments — since operators' eyes never need to leave the console.

Broadcast Bionics XScreen Call-Screening Software Included



XScreen software comes with every Hx6 Engine purchase and provides call control, call screening, data capture, and chat functionality enabling you to quickly answer, screen, and route calls using multiple PC clients. The cloud-based database keeps a log of calls and provides further alert and directory functionality.

XScreen can record and manage caller audio (Livewire systems only) and can additionally act as a softphone for talking to and screening callers directly through a USB headset or soundcard on your XScreen client PC.

XScreen is available in free (Lite) and full (subscription) versions. When you install XScreen for the first time you will receive a 90-day free trial license for the full version. After 90 days you can continue to use the full version with an annual subscription, or use the reduced, Lite functionality free of charge. Please download your XScreen software from www.xscreen2.com.

SPECIFICATIONS

General

- Telos 3rd-generation Adaptive Digital Hybrids
- Telos Exclusive Feedback Reduction Functions
- Send-to-Caller Processing: High-pass Filter, Frequency Shifter, AGC/Limiter, Program-on-Hold AGC/Limiter, Sample Rate Conversion (with AES option)
- Receive-From-Caller Processing: High-pass "Hum" Filter, Smart AGC / Platform Leveler, Noise Gate, Telos DDEQ (Digital Dynamic Equalization) 3-band Adaptive Spectral Processor, Sample Rate Conversion (with AES option)

Analog Inputs

- Send Analog Inputs: 2x
- Program-on-Hold Analog Inputs: 1x
- Connector: XLR Female, Pin 2 High (Active Balanced with Protection)
- Input Level: Adjustable from -7 to +8 dBu (nominal)
- Analog Clip Point: +21 dBu
- Impedance: Bridging, > 10K Ohms
- Analog-to-Digital Converter Resolution: 20 bits

Analog Outputs

- Receive Analog Outputs: 2x
- Connector: XLR Male, Pin 3 High
- Output Level: Adjustable from -7 to +8 dBu (nominal)
- Impedance: <50 ohms
- Digital-to-Analog Converter Resolution: 24 bits
- Headroom Before Clipping: 20 dB headroom above 4dBu nominal levels

Switching Matrix and Conferencing

- Audio Routing and Switch: All Digital
- Telephone Lines: 6
- Hybrids: 2
- Studio Inputs: 2
- Studio Outputs: 2
- Program-on-Hold: 1

Control Ports

Ethernet 100BASE-T

- Web server for configuration and software update
- Telnet for command line control and diagnostics
- Call Screening Interface server allows up to 8 instances of call-screening software to connect simultaneously

General purpose Input/Output

- 2x 15-pin D-sub with status outputs and control inputs

Control Interface

- Up to 12 attached controllers (any mix of VSet6 phones, Console Controllers or screening software) via Ethernet connection

Power Supply

- Type: Internal auto-ranging, 85–250 VAC auto-switching, 50–60 Hz
- Power consumption: 14.2 Watts

Analog Telephone Connectivity

- Universal interface for worldwide application
- Programmable loop current
- Programmable ring and disconnect signaling (loop drop or tone)
- Programmable Flash time
- Caller ID decoding using Bellcore 212 modem standard

Regulatory

North America: FCC and CE tested and compliant, power supply is UL approved.

Europe: Complies with the European Union Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), as amended by Commission Decisions 2005/618/EC, 2005/717/EC, 2005/747/EC (RoHS Directive), and WEEE.