Telos
AUDIO | NETWORKS

Zephyr Xstream

The following information applies to Zephyr Xstream units currently running a version ending in 'r' or 'b' (Livewire-capable units). If your Xstream is running software ending in a 'p' or an 'i,' please download the appropriate software and instructions from the Zephyr support website.

The Zephyr Xstream's software is stored on a reprogrammable memory. To update your Xstream, you will be connecting to it using a standard web browser. If you have never used your Zephyr Xstream's HTTP interface, you may wish to consult your manual before attempting a software update. We advise you to contact Telos Customer Support (have your currently installed software version and serial number handy) to discuss whether newer software will better meet your needs.

Downloading the Software Package

First, you must have a copy of the new software update package. If this was emailed to you by Telos Customer Support, simply save the file to your hard drive from your email client. _Be sure to note where you saved the file_, as you will need to find it from your web browser later.

If you did not receive the file from email, you can download it from the Telos website, http://telos-systems.com.

Connecting to the Xstream's Webpages

If you have never connected to your Xstream via web browsers, you may need to connect some cables and perform the following configuration steps:

1. Connect the computer to be used for the update and the Zephyr Xstream to the same Ethernet network. Typically, this will be done through either a hub or a switch. Note that a direct connection between a computer and your Xstream can be made if an appropriate "crossover" cable is used. Please see _Appendix 5_ of your Xstream User's Manual for more details.
2. Configure the Xstream to be able to communicate on your network. Press the System button three times. You will see a screen that looks similar to the this:
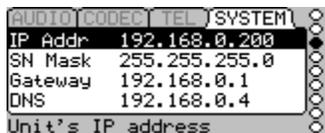
3. Enter the following information in this menu (you may need to contact your network administrator for the details):
    1) IP Address
        The IP (Internet Protocol) address for this Xstream. As with any computer on the network, the Xstream must have a unique IP address before you can communicate with it.
    2) SN Mask
        The subnet mask describes which addresses are local to your network, and which must be accessed through a router. All packets outside this local area are

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        sent to the gateway ndoe entered in the next menu item. Normally, you should enter 255.255.255.0 here, though some larger networks will use 255.255.0.0.

    3) Gateway

        This is only required for a software update if your computer and the Xstream are not on the same subnet. This could happen if, for example, you have separate networks for Livewire and Office networks.

4. Start the web browser on your computer and enter your Xstream's IP address into its location bar. Navigate to the System Parameters or Administration pages (depending on your Xstream's current software version).

5. When prompted, log in. The default login is "user" with no password, though this can be changed on the Administration page as well. If you do not remember your password, you will have to reset the Zephyr Xstream to its factory defaults via the front panel interface.

Saving, Managing, and Updating the Xstream's Software

Once you have logged in to your Xstream's administration webpage, you can manage software versions. At the bottom of the page, you will see a section that looks similar to this:
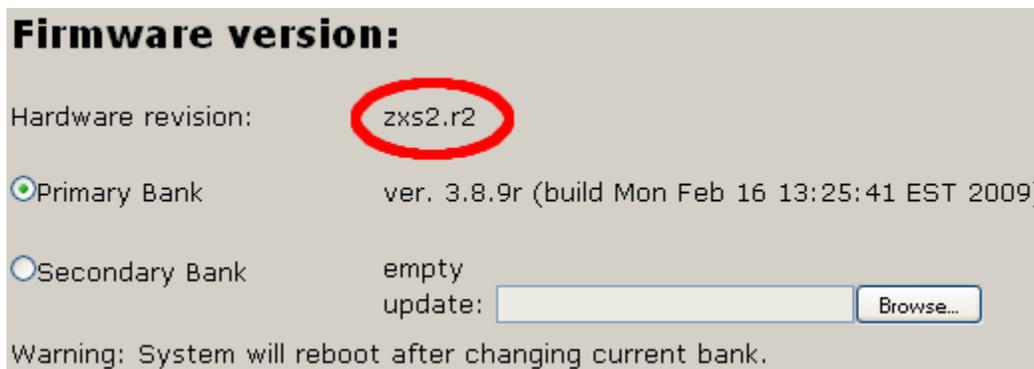
Note the hardware revision, circled in red. The '.r1' or '.r2' at the end of the revision determines whether you should update with a package ending with _r1.pkg or _r2.pkg, respectively.

Please note that, since the release of the 'revision 2' packages, the update package revision 1 will convert your Xstream to be revision 2. This is normal. Also, please note that this conversion cannot be reversed. *After converting an Xstream to revision 2, you can no longer update it using revision 1 packages!*

During the conversion process, the Xstream's web services must be completely stopped. *It is normal for your browser to fail to connect, or return an error message during this update.* **DO NOT SHUT OFF YOUR XSTREAM until the update process is completed!** You will know that the update is completed when your Xstream reboots.

If you are not physically near the Xstream, you can try loading its default webpage. When this loads, navigate back to the Administration page and verify the new version. Updating an Xstream typically takes about five minutes, but please allow for at least twice that time.

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Software Banks

The Xstream has the ability to store two banks of software. This allows you to download a software update and evaluate it before deciding whether you want to keep it.

Software is always downloaded to the secondary bank. Downloading software will overwrite any version in the secondary bank, if any. If you are currently running out of the secondary bank, you can save it to the primary bank by clicking the checkbox that reads "Commit this version to Primary Bank."

Important! The Zephyr will reboot after you click Apply if you change the software version selected. This will interrupt audio. It will also reset the browser connection, so you will need to reconnect.

Installing the New Software

Note: The time to update an Xstream is somewhat variable, and during this time, network services on the Zephyr Xstream may be unreliable – including the web server! Typically, the Xstream takes only five minutes to update. However, during this time, power should not be removed nor the unit reset until at least an hour has passed. It is better by far to spend a little time waiting than to interrupt the updating process! In most cases, the Xstream will reboot on its own in five minutes, and you can then reconnect your web browser.

1. At the bottom of the software administration web page, enter the full path and file name of the update package into the line labeled "update," or click the browse button and find it on your hard drive.
2. After the package is transferred, the page will refresh, giving you an overview of the installation progress. Due to the nature of the update, the Zephyr's web server may stop responding to your browser. Again, this is normal. If your browser reports that it cannot locate the server, or the server is not responding, do not click refresh. Rather, click on your browser's location bar and hit enter. On some browsers, clicking refresh will attempt to send the software update package a second time.
3. When the update is complete, the Zephyr will reboot with the new software enabled. You will know this has happened when the Xstream's splash screen is displayed on the front panel LCD.
4. If you wish to return to your old software for whatever reason, go back to the administration webpage, click the radio button next to the primary bank, and click apply. Your Xstream will reboot to the selected software version. Be aware that changing to an older revision of software may reset some or all of the Xstream's settings to their factory defaults.

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Telos Zephyr Xstream Software Release Notes

For 100Base-T (Livewire-enabled) hardware

4.0.0r   (November 2014)

- Fix for ETS300 "pending seize" problem
- Corrected polarity of Livewire GPIs
- G.722 codec mode now utilizes Livewire channels just as the L3 Dual/Mono codec does
- New version of the Layer 3 Dual/Mono decoder to prevent audio channels from swapping when data corruption or omissions are encountered
- Rework send-side Ethernet streaming buffer to improve reliability and reduce delay
- Fix for a resource management issue that could cause the Ethernet stream sender task to stop
- Fix for an 'out of memory' error that could occur while sending a Ethernet stream
- Fix for rare crash most commonly associated with the Ethernet streaming interface
- Accepts Layer 2 streams from Glennsound codecs that don't feature CRC checking
- Combined support for older audio cards with newer mainboards, and vice versa
- Command-line interface now accepts either 'reset' or 'reboot'

3.8.9r   (February 2009)

- Fix crash associated with activating dial setup with ISDN rollover enabled
- Fix lockup associated with dropping an ISDN line when no connection is active
- Open up bandwidth when streaming > 80 kbps
- Handle blank and invalid WAN IP entry on frontpanel
- Ancillary data is no longer disabled by switching to ISDN mode
- Enable GPI mode selection from web page
- Improve support for Livewire GPIO signals

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3.8.3r (November 2007)

- Transparent rs232 works with binary data
  - Eliminated stray/random characters when booting in transparent rs232 (see app note)
  - Transparent rs232 supports sustained data at 9600 bps
- Panic dials always dial, even if a call must be disconnected first
- Reset to factory defaults resets more, including system passwords and IP address
- RTP streaming enhancements:
  - Streams automatically reconnect on boot if last disconnect was not clean
  - Streams automatically reconnect after network failure
- Redial of last ISDN call in case of power failure is more reliable
- Rollover of ISDN on v.35 failure is more reliable
- Reduce screen flicker when changing menus
- Various cosmetic fixes and enhancements to HTTP interface
- Submitting forms on autodial web page without selecting an item no longer corrupts list
- Fixed occasional wrong audio channel assignment in G.722
- Updated INS-64 redial rules to match current standards

3.4.4r (March 2007)

- Remove +6dB gain on older mixer boards introduced in 3.4.1r
- Updating OS password via web page sets new password correctly

3.4.1r (January 2007)

- Support for new versions of audio boards
- HTTP interface works with Internet Explorer
- HTTP form result pages may be refreshed safely, without resubmitting forms
- Level meters on mixer audio status screen correctly labeled
- Updated command-line interface to be compatible with Zephyr Remote
- Rs232 menu option changes serial bitrate
  - Please note that some startup messages are still sent at 19200 before the application loads
- Swapped application and kernel tlenet server ports:
  - Application command line is on default telnet port,23
  - Kernel interface is now on port 24

3.3.0r (September 2006)

- Restore Factory Defaults now works as intended
- Fixed variable misassignments in mixer version

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3.2.13r   (September 2006)

- Updated to latest Axia Livewire components
- Added multicast TTL selection via command line parameter 'ipstreamttl'
- Fix lockup associated with dropping an ISDN line when no connection is active
- Updated flash write and erase routines
- Fixed rare leak in small buffers of ISDN stack

3.1.1r   (August 2006)

- Initial release for 100Base-T hardware