Zephyr Xstream update information (for version 3.7.9p) February, 2009

The following information applies to Zephyr Xstream units currently running a software version ending with “p” or “i”.

Zephyr Xstream’s software is stored on a re-programmable module. The Xstream can use FTP (File Transfer Protocol) over any IP network to download new firmware from an FTP server into the memory module. We advise you to contact Telos Customer Support (have your current software version and Serial number when you call) to discuss whether the latest version would better meet your needs.

I Installing the Telos Updater ftp server

Note, if your firewall allows access to beta.zephyr.com skip to *section III*, to update directly from the Telos FTP server over the web.

Launch the ZXS379p.exe installer file. Follow the prompts to install the Telos updater and the update files. You can go with the default settings.

This will install the Telos Updater (tsFTP) program, create the proper directory structure, and unpack the update files to the correct directory of the target computer.

II Updating from your local ftp server.

Note, if your firewall allows access to beta.zephyr.com skip to *section III*

First, install the Telos ftp server as described in *section I*, above.

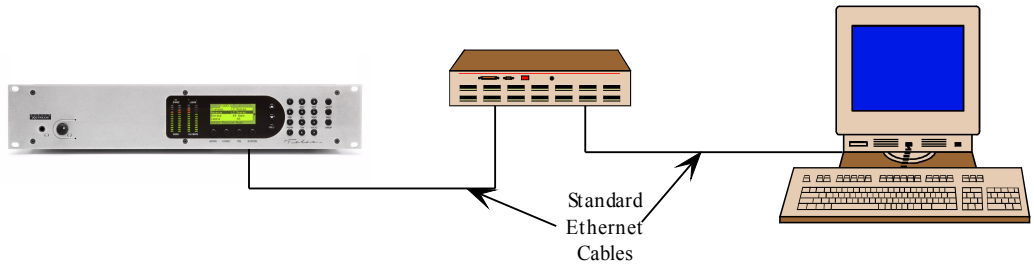
Software update step-by-step (Local Server)

1. You will need to know the IP address of the machine that will be running the ftp server. You can find out your IP address by going to the MS-DOS window and typing: IPConfig <enter> . The information about this machine's network configuration will be displayed.

2. Start the Telos update server (tsFTP). This is normally in a programs group called Telos Systems and is called "Start FTP Server".

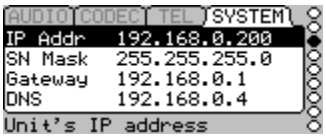
It is important that the download process completed without interruption. If local power is not reliable, you might wish to place the Zephyr Xstream (and local FTP server, if used) on an un-interruptible power supply.

3. Connect the computer to be used for the update and the Zephyr Xstream to the same Ethernet network. The following diagram shows the usual connections. Note that a direct connection between the Xstream and the computer may be made, if the appropriate Ethernet "Crossover" cable is used. See *Appendix 5* of the Xstream User's Manual for details on that cable.



4. Program the following information into your Zephyr Xstream. Ask your network administrator if you need help.

Press the <*SYSTEM*> button three times. You will see a screen that looks like the following:

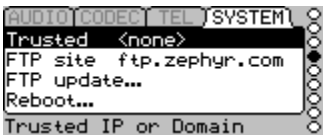


Enter the following information in this menu:

IP Address–
The IP address for this unit. As with any computer on an IP network, the Xstream must have an IP address before it can be used over the network.

SN Mask–
The subnet mask is to determine the size of your local network. All packets addressed to a destination outside this local area are sent to the gateway node entered in the next selection. Normally you should enter 255.255.255.0 here.

Press <*SYSTEM*>. The following screen will be displayed:



FTP Site–
Enter the *FTP site* to be used. This is the IP address of the computer running the Telos Update FTP server (see step 1).

5. Update the system

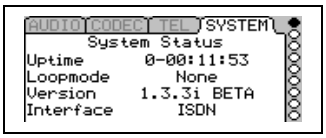
   Select *FTP update…* and press <*SEL*>. Press <▲> or <▼> to choose *OK* . Press <*SEL*>.
   The unit will reboot once the update is complete. It may also give a message about non-volatile RAM values. This message is normal.

   You can confirm that the update process was successful by looking at the Telos update FTP server window. If all went properly you will see "RETR/pub/Zxstream/update/Image was successful"

6. If you are updating from a pre version 1.5.x version to 2.5.x or later, the Xstream will display the following message once it has rebooted: "You must update your unit again to complete the update process!" Repeat step 5.

IMPORTANT TIP	When updating from version 1.2.20p, it is recommended that you update your unit a second time (i.e. repeat step 5).

7. Press <SYSTEM> once and verify that the new software version is shown. The update process is now complete.



III Updating directly from the Telos ftp site

Note: This method may be convenient if your firewall allows access to the Telos ftp site (ftp.zephyr.com).

If your firewall allows FTP (usually port 21) through, then the Xstream can download the new software directly from the Telos FTP site (ftp.telos-systems.com). If your firewall does not allow direct FTP download, see sections *I and II*, above.

Software update step-by-step (Telos Remote Server)

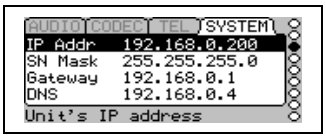
It is important that the download process completed without interruption. If local power is not reliable, you might wish to place the Zephyr Xstream (and local FTP server, if used) on an uninterruptible power supply.

1. Connect the Zephyr Xstream to a network with internet access.

2. Program the following information into your Zephyr Xstream. Ask your network administrator if you need help.

   Ask your network administrator if you do not know the correct settings for the following items.

   Press the <SYSTEM> button three times. The following menu will be shown:



   Enter the following information in this menu:

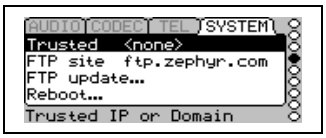
   IP Address –
   The IP address for this unit). As with any computer on an IP network, the Xstream must have an IP address before it can be used over the network.

   SN Mask –
   The subnet mask is to determine the size of your local network. All packets addressed to a destination outside this local area are sent to the gateway node entered in the next selection. Normally you should enter 255.255.255.0 here.

   Gateway –
   This is the IP address of a gateway router connecting you to the internet.

   DNS –
   This is the IP address of the DNS (Domain Name Server) you will be using.

   Press <*SYSTEM*> once. The following menu will be displayed:



FTP Site –
Enter the FTP site to be used. This would normally be *ftp.zephyr.com* if downloading from Telos FTP site.

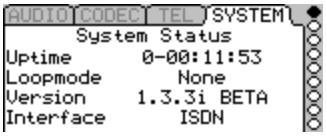
3. Select *FTP update...* and press <*SEL*>. Press <▲> or <▼> to choose *OK* . Press <*SEL*>.

   The unit will reboot once the update is complete. It may also give a message about non volatile RAM values. This message is normal.
   You can confirm that the update process was successful by looking at the Telos update FTP server window. If all went properly you will see "RETR/pub/Zxstream/update/Image was successful".

   If you are updating from a pre version 1.5.x version to 2.5.x or later, the Xstream will display the following message once it has rebooted: "You must update your unit again to complete the update process!". Repeat step 3.

IMPORTANT TIP	When updating to from 1.2.20p, it is recommended that you update your unit a second time (i.e. repeat step 3).

Press <*SYSTEM*> once and verify that the new software version (3.7.9p) is shown. The update process is complete.



CUSTOMER SUPPORT BULLETIN

Telos Zephyr Xstream Software Release Notes

Many users inquire what features are new in the latest firmware release. The following Release Notes show the improvements and features added with each significant release.

1.2.20p
April 2001
Initial release

1.5.2p
August 2001
Production version (limited release)

- Multi-print deadlock conflict solved. Prevents occasional non-volatile memory corruption and lockup.
- L3 Dual Decoder added. Now supports fully independent Layer 3 mono 64 operation on B1 and B2.
- AAC-LD changed. New version requires 1.5.1p or later for compatibility.
- Contact closure support (ancillary data and local control) added. Menus for inputs and outputs added.
- Ancillary data support added. Contact closures and serial data transmission available in all L3 modes, all AAC modes, all AAC-LD modes. Also available in L2 Mono 64 and L2 Half 24.
- Panic Dial added.
- Dial prefix fixed.
- Changed connect sound.
- Enhanced software de-bounce of front panel buttons.
- SYSTEM status screen added.
- Added *Timeout* option to the *SYSTEM* menu to determine if default screen is automatically displayed.
- Default status screen added.
- Improved screen re-writes.
- Changed some default values.
- Added L3 Mono 128 mode.
- Minor ISDN changes; B channel 2 no longer incorrectly reports busy.
- Auto Receive mode only active when ISDN B channel(s) or V.35/X.21 port(s) are active.
- Improved L2 Mono-128 compatibility.
- Fixed AES output sync when “AES IN” option was selected.
- Layer 3 (MP3) streaming to Real Audio and Telos Audioactive players.
- MX/MXP; Added support for Consumer/Professional line output level selection.
- MX/MXP; Fixed output assignment issue.
- Non Mixer version; *Send Mix* option added to first *AUDIO* menu. Allows the sum of A+B to be sent when (primarily useful when mono modes are used).

1.5.5p
August 2001

Zephyr Xstream Update Instructions

Production version

- Memory management changed to reduce occasional problems encountered with FTP update.

2.1.0p
December 2001
Production Version

- Added HTML Web browser interface support.
- Default system password changed from <> to <Telos> (Case sensitive).
- Changed dial screen to reflect last number dialed if Line 2 is dialed first.
- Fixed problem with G.722 decoder adding gain to received audio.
- Improved the ability to boot and display errors in the case of hardware POST failure.
- Removed delay in G.722 encoder present if unit rebooted while in G.722 Xmt.
- Fixed problem where excessive AUTO setups could prevent proper bootup.
- Improved ISDN compatibility with certain ETS 300 lines and DMS-100 custom (signal IE no longer sent in DMS Cust.).
- Added "V.35 single mode" to the INTERFACE selection of the TEL menu (for single V.35 port at 112, 128, 256, 384 kbps). Renamed "V.35" mode to "V.35 split".
- Added streaming encoder support for AAC. Added streaming decoder for Layer 3 and AAC.
- Fixed instability in AAC at 32 kHz.
- Fixed instability in AAC-LD at 48 kHz.
- Update process improved (checksum for loadset).
- Fixed contact closure incompatibility with Zephyr rev 2.66 and earlier.
- Non-Mixer only: fixed *GAIN TRIM* in *AUDIO* menu to be 1 dB steps +/- 12 dB.
- Non-Mixer only: fixed problem were A and B inputs would be summed.
- MX/MXP only: Improved audio fidelity at 48kHz sample rate.
- MX/MXP only: Fixed mixer inputs vs pots assignment issue and monitor 1 vs 2 issue.

2.1.1p
February 2002
Production Version

- Improved compatibility with Dialog-4 codecs

2.2.30i
July 2002
Beta Version

- Improved G.722 decoder. More robust in the presence of clipped audio from far end.

2.2.35i
Aug 2002
Beta Version

- Added *COMPATIBILITY MODE* option to the *CODEC* menu. Set to *Slimline* to operate with Dialog-4 Slimline codecs.
- DDS clock now used for Ethernet audio clock.

Zephyr Xstream Update Instructions

2.5.7p
Mar 2003
Production Version

- Includes changes in 2.2.30i and 2.2.35i.
- New call mode *Xport* for aacPlus modem communication with Zephyr Xport.
- Added aacPlus for use with Zephyr Xport.
- Added ISDN modem DSP support for use with Zephyr Xport. New *Interface* added: *ISDN Modem*
- AAC decoder enhanced to include error concealment. Also more robust when bit errors are present.
- Fixed several problems with HTML interface including line 2 dialing problem.
- *CODEC* status menu changed to include ISDN modem information and compatibility setting.
- *V.35 Single* mode now supports 96 Kbps in AAC modes.

2.7.1p
Oct 2003
Production Version

- Support for Xport at lower bitrates.
- Improved fidelity on return feed to Xport.
- Added 96 kbps for AAC over V.35/X.21
- Added lock function for MX/MXP (locks A/B and Send/Receive settings)
- Added about sub-menu
- Added auto-redial after power cycle.

3.0.7p
February 2006
Production Version

- New streaming engine uses RTP/UDP (TCP streams not recommended)
  - AAC packetization now support full AAC frame thereby enabling MPEG error concealment at decoder.
  - Improved clock mastership algorithm and clock tracking.
  - Added frame reordering, and substitution for lost frames.
  - SIP offers one touch bi-directional calls. Requires two ports.
  - RTP offers audio *push* streams (can receive also if far end also pushes a stream).
- Added menu items in to the *TEL* menu for support of the above:
  - *SIP Port* (default = 5060).
  - *UDP Port* (default = 9150).
  - *HTTP Port* (default = 8080).
  - *TCP Port* (default = 8800).
  - Added following options to the *Interfac*e menu selection:
    - *Ethernet SIP* (establishes bi-direction stream. Requires 2 ports).
    - *Ethernet RTP* (permits mono-directional RTP/UDP streams to be requested form the unit. Permits requesting an incoming screen using the *DIAL* menu).
- Added menu items to the *CODEC* menu in Ethernet mode for support of the above:
  - *Mode*
  - *Buffering*
  - *WAN IP* (IP address of ????, required only when???
  - *Hostname* (used as a caller ID on SIP calls)
- New HTTP engine/pages:
  - Minor tweaks and fixes
  - V.35 menu
- Enabled IP multicast
- Web pages now display hostname to make control of multiple units easier (NOTE: Hostname can be set in the *CODEC* menu when *TEL*/Interface is set to “Ethernet SIP”).
- Fixed reboot problem when making/receiving Xstream call after Xport call.

- Fixed problem with changing between Ethernet and ISDN Interfaces
- Added *PP Out* option "Mixer On" (active when an MX unit has any input assigned)
- Better recovery from marginal/intermittent AES Input or Sync Input connections.
- Fixed AUTO receive mode problems with G.722 and AAC-LD.
- Added "mix-on" option to Status out menus.
- Fixed lack of audio in ISDN calls in progress present since 2.7.1p
- Improvements to ISDN modem code
- Fixed spontaneous "SPID pending" problem in certain 2.9.x and previous 3.0.x betas
- Fixed *About* sub-menu.

3.2.0p
September 2006
Production Version

- Added automatic redial functions for line/power failure
- Added V.35 rollover to ISDN for V.35 failure

3.2.1p
June 2007
Production Version

- Updated files to work with new revision of audio boards

3.7.3p
November 2007
Production Version

- Transparent rs232 works with binary data
- Transparent rs232 supports sustained data at 9600 bps
- Panic dials always dial, even if a call must be disconnected first
- 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 to ISDN on v.35 failure is more reliable
- Fixed web interface in v.35 split mode
- Updated INS-64 redial rules to match current standards.

3.7.9p
February 2009
Production Version

- Fix crash associated with activating dial setup with ISDN rollover enabled
- Fix lockup associated with dropping an ISDN connection when none is active