

TWOx12, TWO, 2101 Studio I/O, & 2101 Extended Hybrid Software Update Procedure

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The Telos unit's software is stored on a re-programmable module. All the above units can use FTP (File Transfer Protocol) over any IP network to download new software from an FTP server into the memory module. There are two ways to obtain this software.

- You can download the latest Software Updater package with an included FTP server to a Windows® computer workstation connected on the same local area network the Telos device is connected.
- You can have the Telos unit connect through your ISP/Internet connection to our public FTP site directly.

Note- You *cannot* download this software through the RS-232 port of the Telos unit.

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.

1 Setting up your Telos Unit for software download

Installing the software by either method requires some preparation. First make sure your Telos unit has the proper TCP/IP settings. Program the following information into your Telos Unit. Ask your network administrator if you need help.

1. Press the <SYSTEM> button and scroll down to the option *labeled TCP/IP Setup*. Highlight that option and press the <SELECT> button select it to enter the sub-menu.
2. Enter the following information in this menu:

IP Addr-

The IP address for this unit. As with any computer on an IP network, the Telos unit must have an IP address before it can be used over the network. The Telos unit requires a STATIC address. It cannot be

configured to obtain an IP address automatically. Make sure the IP address entered is not in use by another device on your network.

Subnet-

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. Verify this with your network administrator.

Gateway-

This is the IP address of a gateway router connecting your network to the Internet. You need this information in order to exit your LAN to the Internet and access our public FTP server. This entry is not needed if you intend to update your unit from a local workstation on your LAN.

DNS IP-

This is the IP address of the DNS (Domain Name Server) you will be using. This is required in order to resolve the domain name to a numerical IP address. This entry is not needed if you enter a numerical address into the *FTPSite* menu option in the *Software Update* menu, such as a workstation's IP address, rather than the default domain name "ftp.zephyr.com".

Back out of the *TCP/IP Setup* menu and scroll down to *Software Update* option. Highlight this option and press the <SELECT> button to enter the sub-menu to enter information here.

Boot Bank-

The Telos unit has the capability to have two different versions of software loaded on its memory module. Selecting the bank from which you boot from will determine which software is loaded when powered up. The software update ALWAYS loads itself into the SECONDARY bank.

IMPORTANT-The unit must have booted from the PRIMARY Bank in order to update the new software to the SECONDARY bank.

Commit Software-

This function forces the SECONDARY bank software to copy itself and overwrite into the PRIMARY bank location. You should do this only when you are operating in the SECONDARY bank and you are sure you wish to keep this version of software. Upon making this change the *Boot Bank* option will change itself back to the PRIMARY choice but it will not automatically reboot the unit to the Primary bank. You must reboot the unit manually or just power cycle the unit once to get the unit to start in the Primary bank.

NOTE- If you changed the TCP/IP settings, or if you changed the *Boot Bank* setting, you will need to reboot the Telos unit for these changes to take effect. You can find the *Reboot* option in the *Software Update* sub-menu.

IMPORTANT TIP-Major software updates from versions 1.x to 2.x or 1.x to 3.x are not likely to retain your current settings as you boot up from PRIMARY bank to SECONDARY bank (ie. Loss of Telco settings for ISDN lines; Audio settings; TCP/IP settings; Boot bank and FTPsite settings, etc.). If you are updating from a very early version to a much newer version it would be wise to write down all your current settings to be prepared to reenter all this information again.

II Installing the software from the Updater Package running on a local workstation

Download the proper installer for your product. The link to our software download page is www.telos-systems.com/?/support/software.htm

You will need to download this application to a Windows NT based computer (Windows NT4, 2000, or XP). For ease of locating your file after downloading, you may want to simply download to your desktop.

Note: The new updater packages are standalone applications with no installation required. When launched the program starts a simple FTP server with the newest files embedded within itself. Previous software updaters are still available for download if you need to revert back to an earlier version. These older updaters may extract folders and files within your directory structure.

NOTE- It is important that the download process to the Telos unit completes without interruption. If local power is not reliable, you might wish to place your Telos unit and your workstation on an un-interruptible power supply.

Software update step-by-step (from a Local Windows Computer)

1. You will need to know the IP address of the machine that will be running the local FTP Server. You can find out your IP address by going to the MS-DOS window and typing: "ipconfig" and pressing <enter>. The information about this machine's network configuration will be displayed.
2. Run the Telos Updater package on your workstation. This will start the FTP server program. You can launch the program from your RUN command line or by double clicking on it.

3. Connect the computer to be used for the update and the Telos unit to the same Ethernet network. Note that a direct connection between the Telos unit and the computer may be made if an Ethernet "Crossover" cable is used. The User's Manual may include details on this type of cable pin out.
4. Press the <SYSTEM> button and scroll down to *Software Update* option. Highlight this option and press the <SELECT> button to enter the sub-menu.

Program the following information into your Telos Unit:

FTPsite-

This will be the location the Telos Unit will look for the software. You will need to enter the IP address of the workstation running the FTP Server Updater package. Note that this entry allows alphanumeric characters. You may need to press the number button up to seven (7) times before getting the number you need.

Boot Bank-

You should be in the PRIMARY bank. If not, change this from SECONDARY to PRIMARY and reboot the unit now.

Commit Software-

If the current version of software you want to keep is still in the SECONDARY bank then you should commit this version to the PRIMARY bank and reboot the unit to the unit now.

IMPORTANT-The unit must have booted up from the PRIMARY bank in order to update the software. You will need to reboot the Telos unit if you changed the *BOOT BANK* option. You do not have to reboot the unit if you only changed the *FTPsite* information.

5. Finally, once you have the correct settings programmed, the workstation is running the Updater FTP program, and you have your Telos unit connected to your LAN OR directly to the workstation via a crossover cable, start the update process as follows:
 - Press the <SYSTEM> button and go to the menu choice *Software Update*. Highlight and select that option to go to the sub-menu.
 - Scroll to the option *Update Software*, highlight it and select it. The unit will prompt you if you want to proceed. Highlight *YES* and press the <SELECT> button to begin the update process.

DO NOT INTERRUPT THE UPDATE PROCESS. Let the unit complete its task. When the update is complete you may see the MEMORY light flash

while the software is being written to the Secondary Bank. You will also note that the Boot Bank option has now changed to SECONDARY. This is anticipating that you NOW wish to reboot the unit to the new software. When you reboot the unit note the splash screen. It will display the software version you just downloaded if the update was successful and the unit booted from the secondary bank.

III Updating directly from the Telos ftp site

This method may be convenient if your firewall allows FTP (usually port 21) through, then the Telos unit can download the new software directly from the Telos FTP site (ftp.zephyr.com). If your firewall does not allow direct FTP download, see section II above.

Software update step-by-step (from Telos Systems' Main FTP Server)

It is important that the download process to the Telos Unit completes without interruption. If local power is not reliable, you might wish to place the Telos unit on an uninterruptible power supply.

1. Connect the Telos unit to a network with Internet access via the Ethernet port.
2. Press the <SYSTEM> button and scroll down to the option labeled *Software Update*. Press the <SELECT> button to enter the sub-menu.

Program the following information into your Telos Unit:

FTPsite-

This will be the location the Telos Unit will look for the software. By default this entry should be "ftp.zephyr.com". This is our primary FTP update server at our company. If needed, change the entry to this location by highlighting it and selecting it. This entry allows alphanumeric characters. Use the keypad to enter the correct name.

Boot Bank-

You should be in the PRIMARY bank. If not, change this from SECONDARY to PRIMARY and reboot the unit now.

Commit Software-

If the current version of software you want to keep is still in the SECONDARY bank then you should commit this version to the PRIMARY bank and reboot the unit now.

IMPORTANT-The unit must have booted up from the PRIMARY bank in order to update the software. You will need to reboot the Telos unit if you changed the *BOOT BANK* option. You do not have to reboot the unit if you only changed the *FTPsite* information.

3. Finally, once you have the correct settings programmed and you have your Telos unit connected to your LAN, start the update process as follows:
 - Press the <SYSTEM> button and go to the menu choice *Software Update*. Highlight and select that option to go to the sub-menu.
 - Scroll to the option *Update Software*, highlight it and select it. The unit will prompt you if you want to proceed. Highlight *YES* and press the <SELECT> button to begin the update process.

DO NOT INTERRUPT THE UPDATE PROCESS. Let the unit complete its task. When the update is complete you may see the MEMORY light flash while the software is being written to the Secondary Bank. You will also note that the *Boot Bank* option has now changed to SECONDARY. This is anticipating that you NOW wish to reboot the unit to the new software. When you reboot the unit note the splash screen. It should display the software version you just downloaded if the unit booted from the secondary bank.

Troubleshooting tips:

- Prior to updating the software you should verify that the unit is properly on your network. Try pinging the Telos unit from a workstation on your network. From an MS-DOS window type "ping <ipaddress_telos_unit>" then press <enter>. You should get a reply back from the Telos unit. If your reply states "*REQUEST TIMED OUT*" four times, you have a problem with your Ethernet connection. Recheck everything (cables, Ethernet ports, IP address conflicts, Subnet mask entries, etc.). You cannot update the software if the unit is not properly communicating on your LAN or to your workstation.
- When use an Ethernet "crossover" cable between a workstation and Telos unit, be sure that the first three numbers of the IP addresses in the two machines are in the same range. Also be sure that the Subnet mask is set to 255.255.255.0
- If you attempt to update the unit, and the Telos unit displays the error message "*Cannot update software from this bank*", your unit is still operating from the Secondary bank. Go to the *Boot Bank* option, select PRIMARY, and reboot the unit. Try updating again.

- If you get an error message on the Telos Unit *"Cannot resolve host"*, this means the DNS cannot resolve the domain name entered, or that the Telos Unit does not have access to a working DNS. Your DNS entry may be invalid or your firewall is preventing your unit from accessing the site. Verify the DNS IP address or enter the actual IP Address of ftp.zephyr.com into the FTPsite option. To find this address open an MS-DOS window and type "ping ftp.zephyr.com" then press <enter>. This should reply back with the name as well as the resolved IP address of our site. If your ping replies with the message *"REQUEST TIMED OUT"* four times then you have a problem accessing our FTP site from your network.
- You launch the FTP server updater package on your workstation and you get an error message that states *"Cannot open Port 21"*. You cannot run the Updater package if port 21 is in use on your workstation by some other application or service. Check your Windows services in the Control Panel to see if Windows has an FTP service started. If it is then STOP it. Try again. If no FTP service shows up in the service list as active then you need to find out what other application has Port 21 on your workstation in use.

For additional assistance you can contact Telos Systems Customer support by email at support@telos-systems.com or by phone 216-241-7225.