



TimeSource 3500

Software Release Document

Release 1.06.07 – TS3000.hex

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General

This document provides information about Release 1.06.07 (TS3000.hex) of the downloadable firmware for Symmetricom's TimeSource 3500.

The TimeSource 3500 Shelf is shipped from the factory with firmware installed. The procedure in this document should be used only for reinstalling existing firmware, or for installing a firmware upgrade.

Corrected Issues

This release of the downloadable firmware includes corrections as listed.

Corrections to 1.06.07 TS3000.hex:

- *Issue 21-18:* The date of year responses in the <date> field are shown in 4 digit format.

Correction: The date of year responses in the <date> field are now returned in 2 digit formats, and is now indicated by the last 2 digits of the year.

- *Issue 21-19:* The AIDs reported by autonomous messages have six spaces preceding the AID.

Correction: There are now only three spaces preceding the AID to comply with NMA.

- *Issue 21-20:* A required double quote is missing before the AID.

Correction: The double quote is now added before the AID.

- *Issue 21-21:* AIDTYPE of EQPT in event and alarm messages was improper.

Correction: AIDTYPE is removed for event and alarm messages.

- *Issue 21-22:* Alarm default settings were incorrect for part 990-72050-11.

Correction: Alarm default settings for part 990-72050-11 are now correct.

- *Issue 21-23:* The occurrence date <orcdat> and occurrence time <ocrtm> fields reported in alarm and event messages before show the following:

The format for <orcdat> is MOY-DOM.

MOY stands for month of year and has a range of 01 to 12.

DOM stands for day of month and has a range of 01 to 31.

The format for <ocrtm> is HOD-MOH-SOM.

HOD stands for hour of day and has a range of 00 to 23.

MOH stands for minute of hour and has a range of 00 to 59.

SOM stands for second of minute and has a range of 00 to 59.

Correction: The occurrence date <ocrdat> and occurrence time <ocrtm> fields reported in alarm and event messages now show the following to comply with GR-833-CORE Issue 4:

The format for <oredat> is MOY-DOM.

MOY stands for month of year and has a range of 1 to 12.

DOM stands for day of month and has a range of 1 to 31.

The format for <ocrtm> is HOD-MOH-SOM.

HOD stands for hour of day and has a range of 0 to 23.

MOH stands for minute of hour and has a range of 0 to 59.

SOM stands for second of minute and has a range of 0 to 59.

Note: Full details for autonomous messages can be found in the *TimeSource 3500 System Guide* for this release.

Known Issues

This release of the firmware includes the following issues:

- *Issue 5-33:* Performance monitoring will not work until the system date is set. On power up, the system date is defaulted to 1970. The performance monitoring manager does not recognize 1970 as a valid date. Also, performance monitoring data will reset if the system date is changed.

Workaround: First, on first power up and after a power cycle, set the current date using the set date TL1 or TimeScan command. Second, if performance monitoring data is being gathered, do not set or reset the system date until the performance data has been collected. Otherwise, the performance monitoring data will be lost.

- *Issue 5-50:* In phase 1 minute performance monitoring, the first 1 min. 40 sec. of the 15 minute data bin will display erroneous data. The erroneous data will be overwritten with correct data when the system moves to the next 15 minute data bin. The first 1 min. 40 sec. of the new bin will display erroneous data until it is overwritten, and so forth.

Workaround: Do not pay attention to the first 1 min. 40 sec. of data of the current 15 minute bin of data, wait until the 15 minute bin is complete and the data is overwritten with the correct data.

- *Issue 13-61:* The antenna elevation mask is not saved in non-volatile memory and will revert back to the factory default setting if the unit is power cycled.

Workaround: Reset the antenna elevation mask after a power cycle.

- *Issue 21-02:* Negative Leap Seconds are not handled properly by the firmware and will give incorrect results until the actual rollover takes place.

Workaround: The problem eventually corrects itself by the next instance of receiving the time from the GPS module.

Estimated Down Time

Systems that have not been in service and alarm-free for 24 hours could have outputs removed from service for 40 to 50 minutes after downloading TS3000.hex and GPS.hex files. No disruption of service shall occur for units that have been operated alarm free for more than 24 hours. The estimated down time is 40 to 50 minutes at 9600 baud for TS3000.hex and DEVx.hex files.

Estimated Installation Time

Downloading this firmware release takes approximately 50 minutes at 9600 baud.

Requirements

The hardware, firmware, and documentation required to operate this firmware release is as follows.

Hardware

A PC with the following minimum items is required.

- 90 MHz Pentium
- 8 MB RAM
- One available serial communications port
- CD-ROM drive
- Minimum 10 MB of hard drive space if using the TimeWizard PC software

Software

The software listed below is required/recommended for the PC.

- Windows 95/98/NT 4.0/2000/XP operating system (required)
- One of the following:
 - *For manual installation* - Terminal emulation software with Y-modem capability
 - *Installation using TimeWizard* - TimeWizard PC software

Note: Refer to *Installation*, below, for information on when it is appropriate to install the firmware using the manual installation procedure or TimeWizard.

Documentation

Use the manual/revision listed below. Higher revisions of the manual can also be used.

<u>Manual</u>	<u>Part Number</u>	<u>Revision</u>
TimeSource 3500	997-72050-01	H

Installation

There are now two methods of installing firmware on the TimeSource 3500. The first method is manual and is required in the following instance:

- DEVx.hex files must be installed

To install this firmware release manually, follow the steps in Procedure A.

The second method makes use of TimeWizard, a Windows Wizard-like application that automates the installation process. TimeWizard is recommended for use in the following instance:

- No DEVx.hex files will be installed

To install this firmware release using TimeWizard, follow the steps in Procedure B.

Manual Firmware Installation

Use Procedure A when DEVx.hex files must be installed during the installation. If no DEVx.hex files will be installed, use Procedure B instead.

Procedure A. Manual Firmware Installation

Step	Procedure
	<p>This procedure installs the firmware in the TimeSource 3500 using the manual installation method. This procedure assumes that the TimeSource 3500 Shelf is installed and powered.</p>
	<p><i>Caution:</i> After installing this firmware release, the system performance may enter the degraded region of the PRS mask for up to 1 hr, if the units have not been in service or alarm free for more than 24 hours.</p>
	<p><i>Note:</i> In this procedure, ignore all responses and alarms not specifically mentioned.</p>
	<p><i>Equipment:</i></p>
	<ol style="list-style-type: none">1. A computer that accepts a CD-ROM drive, has a hard drive with at least 2 megabytes of disk space available, and has an ASCII terminal emulation program capable of a Y-modem batch transfer of files. The computer must have an RS-232 connection to the shelf with the following settings: local echo off, 8 data bits, no parity, 1 stop bit, and 9600 baud.2. The TimeSource 3500 CD-ROM labeled 992-72050-06 Rev. D Version 1.06.07.
1	Insert the TimeSource 3500 CD-ROM labeled 992-72050-06 Rev. D Version 1.06.07 into the computer.
2	Create a new directory on the hard drive of the computer.
3	<p>Copy the TS3000.hex, GPS.hex, and DEVx.hex files from the TimeSource 3500 CD-ROM to the directory created in the previous step. A system requires a specific DEVx.hex file:</p> <ul style="list-style-type: none">• 090-72050-01 systems (no module) require the DEV1.hex file• 090-72050-02 systems (eight T1 outputs module) require the DEV5.hex file• 090-72050-03 systems (eight composite clock outputs module) require the DEV1.hex file• 090-72050-05 systems (two IRIG-B outputs module) require the DEV3.hex file• 090-72050-06 systems (eight mixed E1/T1 outputs module) require the DEV9.hex file• 090-72050-07 systems (mixed T1/CC daughterboard) require the DEV11.hex file
4	Remove the TimeSource 3500 CD-ROM from the computer.
5	<p>At the computer, from the terminal emulation program, press the semicolon (;) key.</p> <p><i>Requirement:</i> The computer shows one of the following:</p> <p>“C”</p> <p>or</p> <p>a TL1 deny message</p>
6	If “C” was the response in the previous step, continue with the next step. If “C” was <i>not</i> the response in the previous step, skip to Step 9.
7	Activate a Y-modem transfer of the TS3000.hex file from the directory created in Step 2 to the TimeSource 3500. The download may take up to 35 minutes.

Procedure A. Manual Firmware Installation (cont'd)

Step	Procedure
8	<p>After the terminal emulation software indicates that the transfer has been completed, wait 90 seconds, then enter “;”.</p> <p>If the result is “C”, the transfer was incomplete; repeat Step 7. If the result is a deny response, the transfer has been completed; continue with the next step.</p>
9	<p>Enter the following command:</p> <pre>ACT-USER::<uid>:<ctag>::<pid>;< pre=""> <p><i>Note:</i> If you do not know the <uid> parameter (user identifier or user name) or <pid> parameter (private identifier or password), ask your system administrator.</p> <p><i>Requirement:</i> When completed, the following is displayed:</p> <pre>TS3500 <date> <time> M <ctag> COMPLD /* LINK: x, CMD: ACT-USER::<uid>:<ctag>::<pid> *="" ;<="" pre=""> </uid>:<ctag>::<pid>></pre></uid>:<ctag>::<pid>;<></pre>
10	<p>Determine the versions of the operating system firmware, the GPS receiver firmware, and the hardware option firmware currently installed by entering the following command:</p> <pre>RTRV-INVENTORY:[<tid>]:TS3500:<ctag>;</pre> <p><i>Requirement:</i> The following is displayed:</p> <pre>TS3500 <date> <time> M <ctag> COMPLD “TS3500::::<CARD=TS3500> MACID=x, TYPE=x, PART=x, SERIAL=x, SOFTVER_TS3500=x, SOFTVER_GPS=x, SOFTVER_DEV=x” /* LINK: x, CMD: RTRV-INVENTORY:[<tid>]:TS3500:<ctag> */ ;</pre> <p>The firmware version of the operating system (SOFTVER_TS3500=x), the GPS receiver (SOFTVER_GPS=x), and the hardware (SOFTVER_DEV=x) are shown near the bottom of the response.</p>

Procedure A. Manual Firmware Installation (cont'd)

Step	Procedure																														
11	<p>Determine if the latest firmware versions are installed by comparing the results of the previous step with the firmware versions in this firmware release. This firmware release includes the following:</p> <table border="0"> <tr> <td data-bbox="305 394 954 426"><u>Firmware</u></td> <td data-bbox="967 394 1479 426"><u>TL1 response for the version in this release</u></td> </tr> <tr> <td data-bbox="305 426 954 457">Operating System firmware</td> <td data-bbox="967 426 1479 457">SOFTVER_TS3000=1.06.07</td> </tr> <tr> <td data-bbox="305 457 954 489">GPS Receiver firmware</td> <td data-bbox="967 457 1479 489">SOFTVER_GPS=1.02.04</td> </tr> <tr> <td colspan="2" data-bbox="305 489 1479 520">Plus firmware for one of the following:</td> </tr> <tr> <td data-bbox="329 520 954 552">Hardware for 090-72050-01 (DEV1)</td> <td data-bbox="967 520 1479 552">SOFTVER_DEV=1.03.02</td> </tr> <tr> <td data-bbox="329 552 954 583">Hardware for 090-72050-02 (DEV5)</td> <td data-bbox="967 552 1479 583">SOFTVER_DEV=1.03.02-1.01.01</td> </tr> <tr> <td data-bbox="329 583 954 615">Hardware for 090-72050-03 (DEV1)</td> <td data-bbox="967 583 1479 615">SOFTVER_DEV=1.03.02</td> </tr> <tr> <td data-bbox="329 615 954 646">Hardware for 090-72050-05 (DEV3)</td> <td data-bbox="967 615 1479 646">SOFTVER_DEV=1.03.02-1.01.01</td> </tr> <tr> <td data-bbox="329 646 954 678">Hardware for 090-72050-06 (DEV9)</td> <td data-bbox="967 646 1479 678">SOFTVER_DEV=1.03.02-1.01.01</td> </tr> <tr> <td data-bbox="329 678 954 709">Hardware for 090-72050-07 (DEV11)</td> <td data-bbox="967 678 1479 709">SOFTVER_DEV=1.03.02-1.01.01</td> </tr> </table>	<u>Firmware</u>	<u>TL1 response for the version in this release</u>	Operating System firmware	SOFTVER_TS3000=1.06.07	GPS Receiver firmware	SOFTVER_GPS=1.02.04	Plus firmware for one of the following:		Hardware for 090-72050-01 (DEV1)	SOFTVER_DEV=1.03.02	Hardware for 090-72050-02 (DEV5)	SOFTVER_DEV=1.03.02-1.01.01	Hardware for 090-72050-03 (DEV1)	SOFTVER_DEV=1.03.02	Hardware for 090-72050-05 (DEV3)	SOFTVER_DEV=1.03.02-1.01.01	Hardware for 090-72050-06 (DEV9)	SOFTVER_DEV=1.03.02-1.01.01	Hardware for 090-72050-07 (DEV11)	SOFTVER_DEV=1.03.02-1.01.01										
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Plus firmware for one of the following:																															
Hardware for 090-72050-01 (DEV1)	SOFTVER_DEV=1.03.02																														
Hardware for 090-72050-02 (DEV5)	SOFTVER_DEV=1.03.02-1.01.01																														
Hardware for 090-72050-03 (DEV1)	SOFTVER_DEV=1.03.02																														
Hardware for 090-72050-05 (DEV3)	SOFTVER_DEV=1.03.02-1.01.01																														
Hardware for 090-72050-06 (DEV9)	SOFTVER_DEV=1.03.02-1.01.01																														
Hardware for 090-72050-07 (DEV11)	SOFTVER_DEV=1.03.02-1.01.01																														
12	<p>If no further downloading is required, skip to Step 19. To download files, continue with the next step.</p> <p><i>Note:</i> If any alarms are present, clear them.</p> <p><i>Caution:</i> For an in-service system, ensure system has been in service for a minimum of 24 hours before downloading. Systems that have not been in service and alarm-free for 24 hours could have outputs removed from service for 40 to 50 minutes.</p>																														
13	<p>Based on the results of Step 11, determine the names of the firmware files to download, then the <aid> associated with that firmware from the following:</p> <table border="0"> <tr> <td data-bbox="305 1161 711 1192"><u>Firmware</u></td> <td data-bbox="724 1161 954 1192"><u><aid></u></td> <td data-bbox="967 1161 1479 1192"><u>File Name</u></td> </tr> <tr> <td data-bbox="305 1192 711 1224">Operating System firmware</td> <td data-bbox="724 1192 954 1224">TS3000</td> <td data-bbox="967 1192 1479 1224">TS3000.hex</td> </tr> <tr> <td data-bbox="305 1224 711 1255">GPS Receiver firmware</td> <td data-bbox="724 1224 954 1255">GPS</td> <td data-bbox="967 1224 1479 1255">GPS.hex</td> </tr> <tr> <td colspan="3" data-bbox="305 1255 1479 1287">Plus firmware for one of the following (if upgrade is necessary):</td> </tr> <tr> <td data-bbox="329 1287 711 1318">Hardware (for 090-72050-01)</td> <td data-bbox="724 1287 954 1318">DEV1</td> <td data-bbox="967 1287 1479 1318">DEV1.hex</td> </tr> <tr> <td data-bbox="329 1318 711 1350">Hardware (for 090-72050-02)</td> <td data-bbox="724 1318 954 1350">DEV5</td> <td data-bbox="967 1318 1479 1350">DEV5.hex</td> </tr> <tr> <td data-bbox="329 1350 711 1381">Hardware (for 090-72050-03)</td> <td data-bbox="724 1350 954 1381">DEV1</td> <td data-bbox="967 1350 1479 1381">DEV1.hex</td> </tr> <tr> <td data-bbox="329 1381 711 1413">Hardware (for 090-72050-05)</td> <td data-bbox="724 1381 954 1413">DEV3</td> <td data-bbox="967 1381 1479 1413">DEV3.hex</td> </tr> <tr> <td data-bbox="329 1413 711 1444">Hardware (for 090-72050-06)</td> <td data-bbox="724 1413 954 1444">DEV9</td> <td data-bbox="967 1413 1479 1444">DEV9.hex</td> </tr> <tr> <td data-bbox="329 1444 711 1476">Hardware (for 090-72050-07)</td> <td data-bbox="724 1444 954 1476">DEV11</td> <td data-bbox="967 1444 1479 1476">DEV11.hex</td> </tr> </table> <p><i>Notes:</i></p> <ol style="list-style-type: none"> <li data-bbox="305 1581 1479 1612">1. The <aid> and file name will be used in the next two steps. <li data-bbox="305 1612 1479 1726">2. The DEV files are not upgraded from the previous release, and downloading any of the DEV files will take the system out of service for 40 to 50 minutes. Do not download a DEVn.hex file unless the currently installed file is corrupted or new hardware is installed. 	<u>Firmware</u>	<u><aid></u>	<u>File Name</u>	Operating System firmware	TS3000	TS3000.hex	GPS Receiver firmware	GPS	GPS.hex	Plus firmware for one of the following (if upgrade is necessary):			Hardware (for 090-72050-01)	DEV1	DEV1.hex	Hardware (for 090-72050-02)	DEV5	DEV5.hex	Hardware (for 090-72050-03)	DEV1	DEV1.hex	Hardware (for 090-72050-05)	DEV3	DEV3.hex	Hardware (for 090-72050-06)	DEV9	DEV9.hex	Hardware (for 090-72050-07)	DEV11	DEV11.hex
<u>Firmware</u>	<u><aid></u>	<u>File Name</u>																													
Operating System firmware	TS3000	TS3000.hex																													
GPS Receiver firmware	GPS	GPS.hex																													
Plus firmware for one of the following (if upgrade is necessary):																															
Hardware (for 090-72050-01)	DEV1	DEV1.hex																													
Hardware (for 090-72050-02)	DEV5	DEV5.hex																													
Hardware (for 090-72050-03)	DEV1	DEV1.hex																													
Hardware (for 090-72050-05)	DEV3	DEV3.hex																													
Hardware (for 090-72050-06)	DEV9	DEV9.hex																													
Hardware (for 090-72050-07)	DEV11	DEV11.hex																													

Procedure A. Manual Firmware Installation (cont'd)

Step	Procedure
14	<p>Enter the following command with the appropriate <aid> (determined in the previous step):</p> <pre>CPY-MEM::<aid>:ctag::AUX, ,WKG:PGM;</pre> <p><i>Note: The Y-modem transfer in the next step must be started within 60 seconds of entering the CPY-MEM in this step, or the system times out, and the CPY-MEM command will have to be re-entered.</i></p>
15	<p>Activate a Y-modem transfer of the appropriate file (from Step 13) from the directory created in Step 2 to the TimeSource 3500.</p>
16	<p>After the terminal emulation software indicates that the transfer has been completed, wait 90 seconds.</p> <p><i>Requirement:</i> Either a TL1 completed message or a TL1 deny message is displayed.</p> <p><i>Note: If the TS3000.hex or DEV.hex file was downloaded, the user is logged off. If the GPS.hex file was downloaded, the user remains logged on.</i></p>
17	<p>If a deny message was displayed in the previous step, repeat Steps 14 through 16. If a completed message was displayed in the previous step, continue with the next step.</p>
18	<p>If additional files require downloading:</p> <ul style="list-style-type: none"> • If the TS3000.hex or DEV.hex file was downloaded and another file requires downloading, repeat Steps 9 through 17. • If the GPS.hex file was downloaded and another file requires downloading, repeat Steps 10 through 17. <p>If no additional files require downloading, continue with the next step.</p>
19	<p>Delete all files in the directory created in Step 2.</p>
20	<p>Delete the directory created in Step 2.</p>

End of Procedure

Firmware Installation Using TimeWizard

Use Procedure B when no DEVx.hex files will be installed during the installation. If DEVx.hex files must be installed during the installation, use Procedure A instead.

Procedure B. TimeWizard Firmware Installation

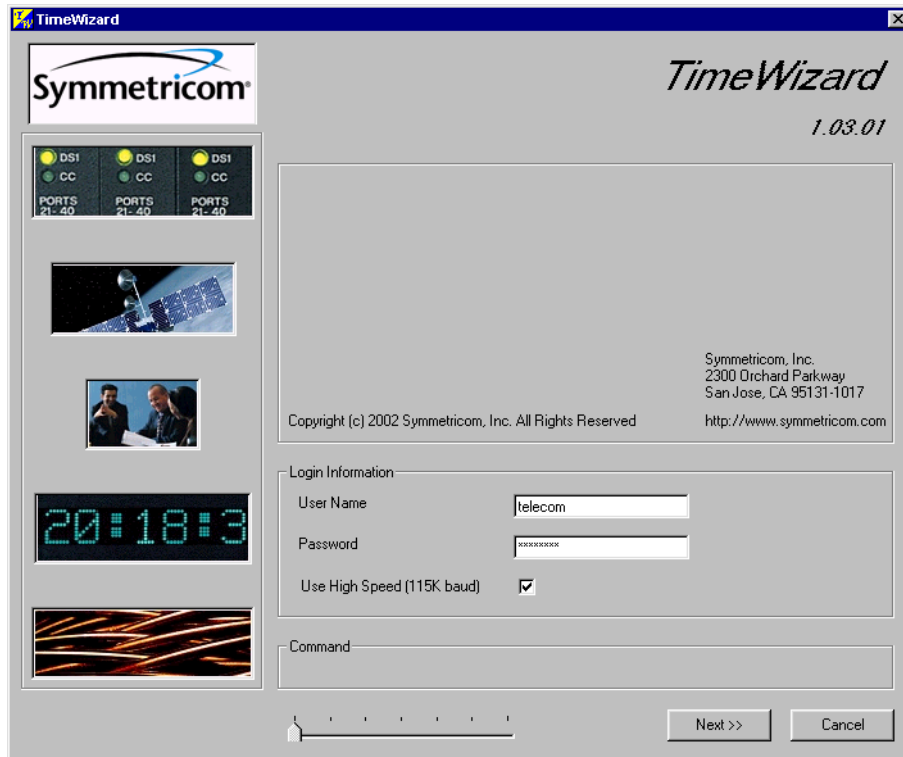
Step	Procedure
<p>This procedure installs the firmware in the TimeSource 3500, and configures the GPS and Holdover alarms, using the TimeWizard application.</p>	
<p><i>Requirements:</i></p>	
<ol style="list-style-type: none">1. A PC with Windows 95/98/NT 4.0/2000/XP.2. The TimeSource 3500 CD-ROM labeled 992-72050-06 Rev. D Version 1.06.07.	
<p style="text-align: center;"><i>Install the Hardware</i></p>	
1	Connect the TimeSource to the PC with a serial cable.
<p style="text-align: center;"><i>Install the TimeWizard Software</i></p>	
2	<p>Insert the TimeSource CD (part number 992-72050-06 Rev. D) into the CD-ROM drive of the PC.</p> <p>If AutoRun is enabled on the PC, the CD should automatically launch the Install Shield wizard for installation of the TimeWizard application. If Install Shield launches, continue with Step 4. If Install Shield does not automatically launch, continue with the next step.</p>
3	In Windows Explorer, double-click "setup.exe" in the root directory of the CD to start the Install Shield wizard.
4	<p>Follow the prompts in the Install Shield wizard to install TimeWizard in the preferred directory.</p> <p>Continue with the next step after the TimeWizard installation is complete.</p>

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
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Start TimeWizard

5 From the Windows desktop, click Start ⇒ Programs ⇒ TimeWizard to start the TimeWizard application. When TimeWizard starts, the "TimeWizard" main screen appears:



The version of TimeWizard that is installed is indicated at the top right of the screen. The progress indicator at the bottom of the screen shows which of the seven screens you are currently viewing.

Note that the factory default TimeSource username of "telecom" and password of "TS3000!!" appear in the Login Information area of the screen.

6 If the user name or password of the TimeSource have been changed, enter the proper user name or password, otherwise, continue with the next step.

7 To select the high-speed download option, in which the firmware download takes place at approximately 12 times the default speed of 9600 baud, select the Use High Speed (115K baud) check-box, then click the Next>> button to progress to the next screen.

If you do not wish to use the high-speed download option, leave the Use High Speed (115K baud) check-box unselected and click the Next>> button.

Note: In most cases, it is desirable to proceed with the Use High Speed (115K baud) check-box selected. In certain instances, as when the PC's communications port does not support a 115K baud rate, de-select the Use High Speed (115K baud) check-box before proceeding.

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
	<i>Download the GPS.hex Firmware</i>

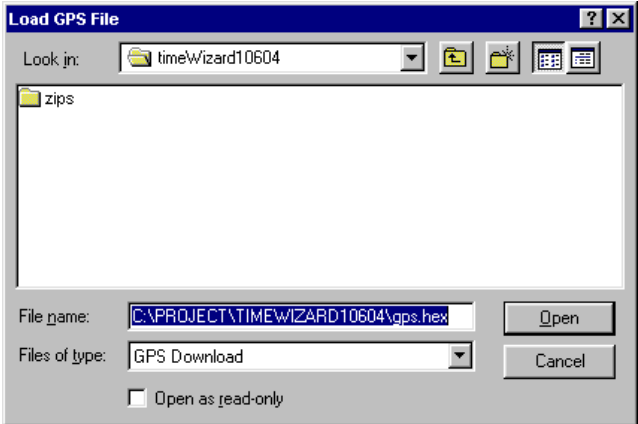
Note: If you are not downloading GPS.hex firmware, click the Next>> button again to advance to the "Download TS3000.hex" screen, then skip to Step 13.

8 After the Next>> button is clicked in the previous step, the "Download GPS.hex" screen appears:



The versions of the GPS.hex and TS3000.hex firmware that are currently installed in the TimeSource are shown in the GPS.hex Ver and TS3000.hex Ver fields. Current satellite information is shown in the GPS Status field.

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
9	<p>Click the ver Unknown button to open the Load GPS File dialog box:</p> 
10	<p>In the Load GPS File dialog box, navigate to the GPS.hex firmware file to be downloaded, then click the Open button.</p> <p>After the Open button is clicked, the message "Verifying version for C:\directory\Gps.hex (approx 10 secs)" appears in the Command area of the screen. Once TimeWizard has verified that the version of the firmware is correct, the text on the ver Unknown button changes to show the version of the firmware to be downloaded.</p> <p>After TimeWizard verifies the firmware version, select the Download GPS.hex check-box, then click the Next>> button to start the firmware download operation.</p>

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
11	<p>When the firmware download operation starts, the Download Progress dialog box appears:</p> <div data-bbox="639 365 1149 604" data-label="Image"></div> <p>As the download operation proceeds, the value in the Packet field increases, and the Progress bar shows the progress of the operation. When the firmware download is complete, the Download Progress dialog box closes.</p> <p>After the Download Progress dialog box closes, continue with the next step.</p> <p><i>Notes:</i></p> <ol style="list-style-type: none">1. The firmware download operation can be aborted at any time by clicking the Cancel button in the Download Progress dialog box.2. If the download fails for any reason, a screen appears with instructions to contact Symmetricom. If this happens, exit the application, check the cable connections, and restart TimeWizard.
12	<p>After the Download Progress dialog box closes, continue to monitor the messages reported in the Commands area of the screen.</p> <p>After the firmware file finishes downloading from the PC to the TimeSource, the TimeSource requires more time to complete the firmware upgrade process. During this time, it should not be interrupted. When the firmware upgrade is fully complete, TimeWizard automatically advances to the next screen.</p> <p>After the screen automatically advances, continue with the next step.</p>

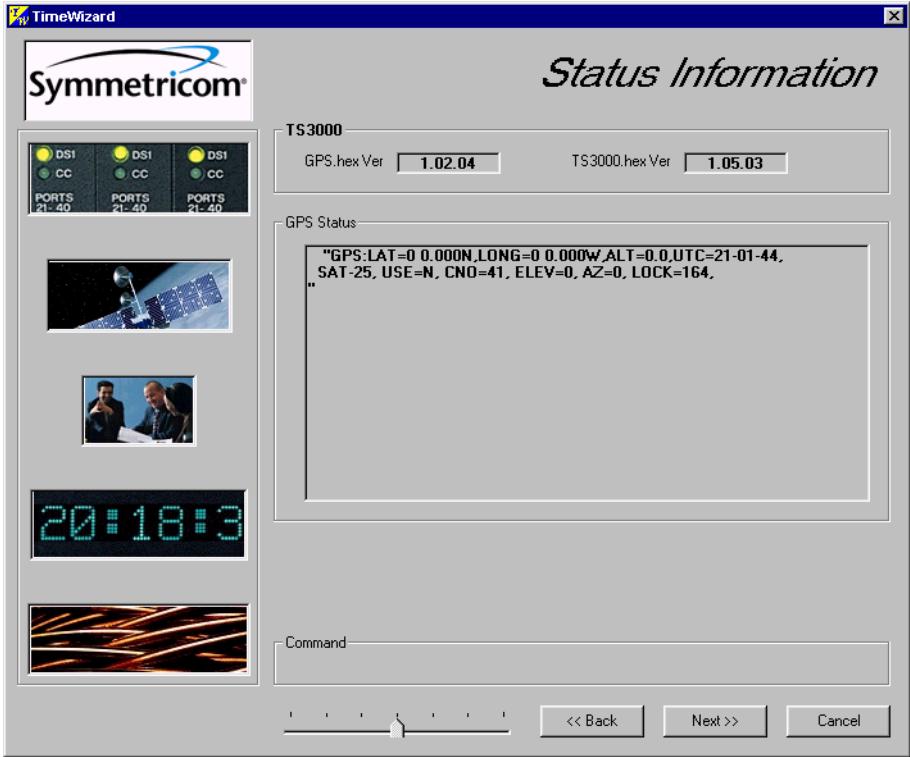
Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
<i>Download the TS3000.hex Firmware</i>	
<i>Note:</i> If you are not downloading TS3000.hex firmware, click the Next>> button again, then skip to Step 19.	
13	The "Download TS3000.hex" screen appears very similar to the "Download GPS.hex" screen shown in Step 8, and contains the same information.
14	Click the ver Unknown button to open the Load TS3000 File dialog box, which appears very similar to the dialog box shown in Step 9.
15	<p>In the Load TS3000 File dialog box, navigate to the TS3000.hex firmware file to be downloaded, then click the Open button.</p> <p>After the Open button is clicked, the message "Verifying version for C:\directory\tS3000.hex (approx 30 secs)" appears in the Command area of the screen. Once TimeWizard has verified that the version of the firmware is correct, the text on the ver Unknown button changes to show the version of the firmware to be downloaded.</p> <p>After TimeWizard verifies the firmware version, select the Download TS3000.hex check-box, then click the Next>> button to start the firmware download operation.</p> <p><i>Note:</i> If TimeWizard cannot verify the firmware version, open the "version.twz" file that is contained in the directory that contains the TimeWizard application (the file is a plain text file that can be opened using any text editing program). The "version.twz" file must contain a line that indicates the version of TS-3x00 firmware being downloaded. For example, if version 1.06.03 of firmware is being downloaded, the file must contain the line "1.06.03", "6368". If the appropriate line does not appear in the file, contact Symmetricom technical support to obtain a version of the "version.twz" file that is correct for your download.</p>
16	<p>When the firmware download operation starts, the Download Progress dialog box appears.</p> <p>As the download operation proceeds, the value in the Packet field increases, and the Progress bar shows the progress of the operation. When the firmware download is complete, the Download Progress dialog box closes.</p> <p>After the Download Progress dialog box closes, continue with the next step.</p> <p><i>Notes:</i></p> <ol style="list-style-type: none"> 1. The firmware download operation can be aborted at any time by clicking the Cancel button in the Download Progress dialog box. 2. If the download fails for any reason, a screen appears with instructions to contact Symmetricom. If this happens, exit the application, check the cable connections, and restart TimeWizard.

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
17	<p>After the Download Progress dialog box closes, continue to monitor the messages reported in the Commands area of the screen.</p> <p>After the firmware file finishes downloading from the PC to the TimeSource, the TimeSource requires more time to complete the firmware upgrade process. During this time, it should not be interrupted. When the firmware upgrade is fully complete, TimeWizard automatically advances to the next screen.</p> <p><i>Note:</i> After the TS3000.hex download operation successfully completes, the TimeSource reboots so that it can use the newly installed firmware. Upon rebooting, the system's output might enter the degraded region of the PRS mask for up to one hour. For systems equipped with a Rubidium internal oscillator, the system output will be within the PRS mask if the unit has been in service and alarm free for more than 24 hours. Systems with Rubidium oscillators are the 090-72050-xx and the 090-72060-xx.</p> <p>After the screen automatically advances, continue with the next step.</p>

Verify the Firmware Versions

18	<p>The "Status Information" screen appears as follows:</p>  <p>Verify that GPS.hex Ver and TS3000.hex Ver fields show that the correct versions of the GPS.hex and TS3000.hex firmware are now installed, then click the Next>> button.</p>
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Setup the Alarm Parameters

19 When the Next>> button is clicked, the "Set the Alarm Parameters" screen appears:



The Load and Save buttons allow a file to be generated that saves the alarm parameters in a file called TS3Kconf.sym as default. The file name for a configuration can be saved by selecting the Save button and providing a file name. The Load button allows the user to load a saved file that will automatically configure the Alarm Parameters screen.

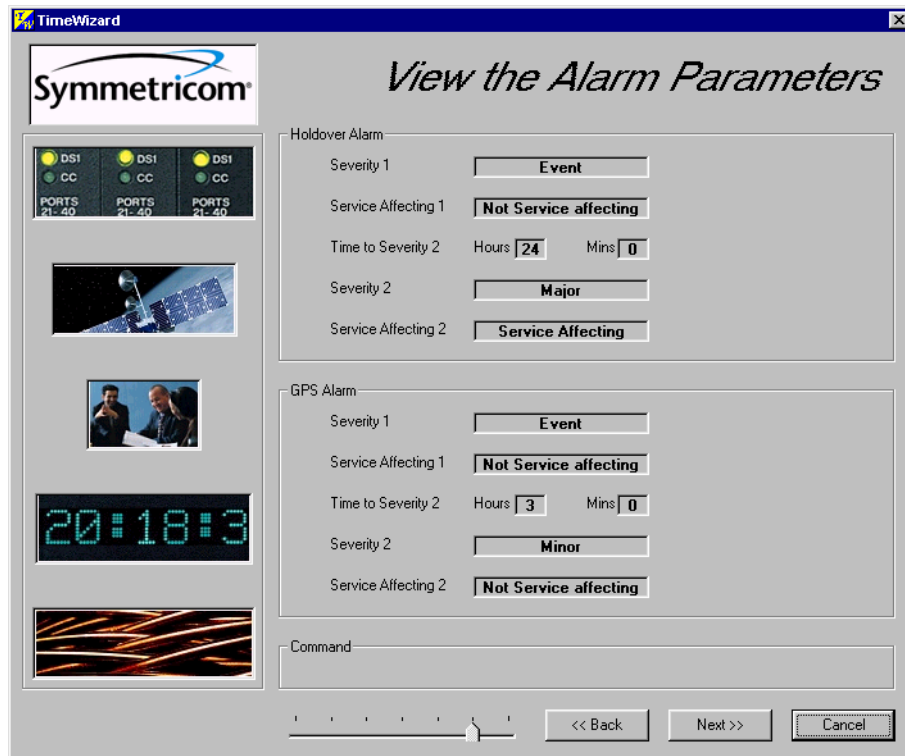
This screen allows the parameters for GPS and Holdover alarm conditions to be modified.

If you do not want to modify any of the alarm parameters, click the Next>> button and continue with Step 21. Otherwise, continue with the next step.

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure												
20	<p>Choose the alarm parameters as desired. A description of each setting follows:</p> <table border="0"> <thead> <tr> <th style="text-align: left;"><u>Setting</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>Severity 1</td> <td>The initial severity of the alarm.</td> </tr> <tr> <td>Service Affecting 1</td> <td>The initial service affecting status of the alarm condition.</td> </tr> <tr> <td>Time to Severity 2</td> <td>If the Escalate Alarm check-box is selected, the alarm will be escalated to the severity and service affecting status selected under Severity 2 and Service Affecting 2, after the time period selected under Hours and Mins has been reached. If the Escalate Alarm check-box is not selected, the alarm will not be escalated.</td> </tr> <tr> <td>Severity 2</td> <td>The severity of the alarm after it has been escalated.</td> </tr> <tr> <td>Service Affecting 2</td> <td>The service affecting status of the alarm condition after the alarm has been escalated.</td> </tr> </tbody> </table> <p>When you are finished modifying the alarm parameters, click the Next>> button.</p>	<u>Setting</u>	<u>Description</u>	Severity 1	The initial severity of the alarm.	Service Affecting 1	The initial service affecting status of the alarm condition.	Time to Severity 2	If the Escalate Alarm check-box is selected, the alarm will be escalated to the severity and service affecting status selected under Severity 2 and Service Affecting 2, after the time period selected under Hours and Mins has been reached. If the Escalate Alarm check-box is not selected, the alarm will not be escalated.	Severity 2	The severity of the alarm after it has been escalated.	Service Affecting 2	The service affecting status of the alarm condition after the alarm has been escalated.
<u>Setting</u>	<u>Description</u>												
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Severity 2	The severity of the alarm after it has been escalated.												
Service Affecting 2	The service affecting status of the alarm condition after the alarm has been escalated.												

21 When the Next>> button is clicked, the "View the Alarm Parameters" screen appears:



This screen confirms the alarm parameter settings from the previous screen.

If the settings are correct, click the Next>> button to continue. If the settings are not correct, click the <<Back button to return to the "Set the Alarm Parameters" screen, and correct the settings.

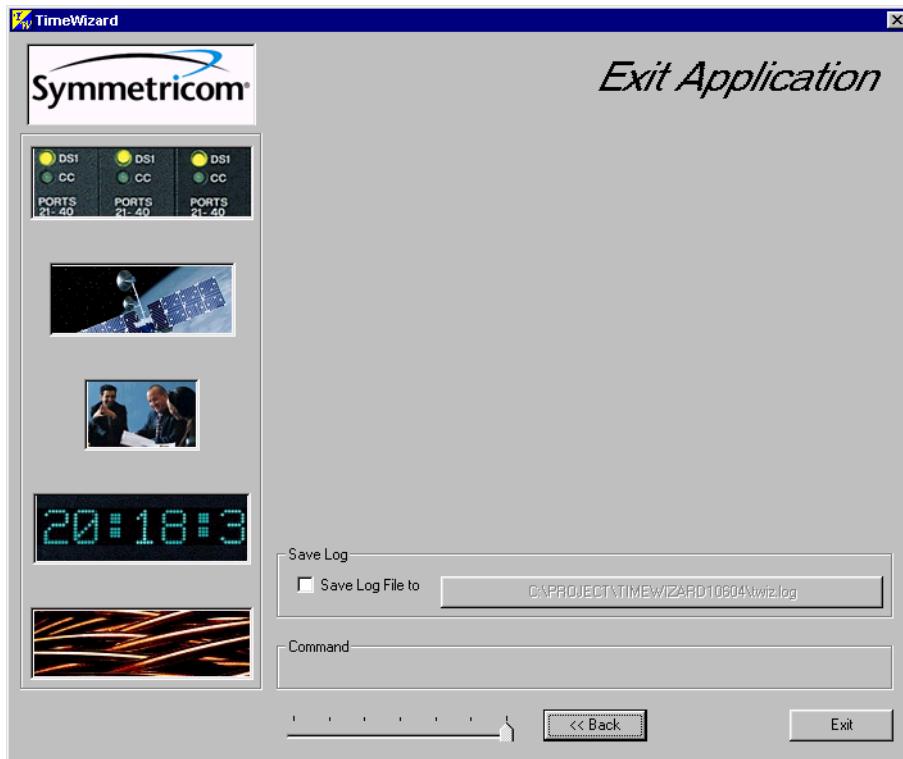
Procedure B. TimeWizard Firmware Installation (cont'd)

Step

Procedure

Save the Log File, if Desired

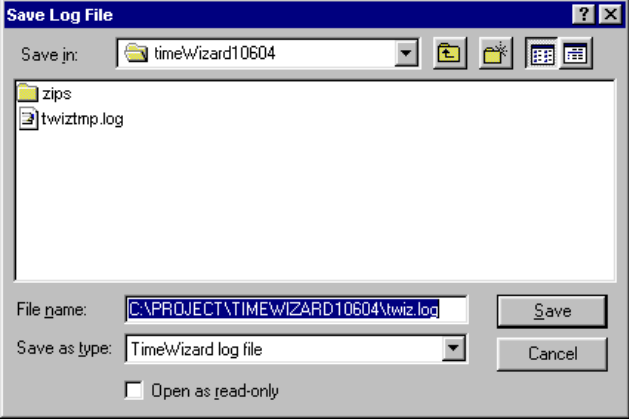
22 When the Next>> button is clicked, the "Exit Application" screen appears:



This screen allows you to save the log file from the download operation, or exit TimeWizard without saving the log file.

If you do not wish to save the log file, ensure that the Save Log File to check-box is not selected, then click the Exit button to complete the TimeWizard firmware installation procedure. To save the log file, continue with the next step.

Procedure B. TimeWizard Firmware Installation (cont'd)

Step	Procedure
23	<p>Select the Save Log File to check-box, then click the button that is adjacent to the check-box to invoke the Save Log File dialog box:</p> 
24	<p>In the Save Log File dialog box, navigate to the location to where the log file is to be stored, enter a name for the log file into the File Name field, then click the Save button to save the log file.</p>
25	<p>Click the Exit button to complete the TimeWizard firmware installation procedure.</p>

End of Procedure

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