

ACCESS SYSTEM 2000

Test System 2000 Release Notes

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FCC Statement (for Users of AS2000 equipment)

The Federal Communications Commission (FCC) Rules require that you be notified of the following:

This equipment has been tested and found to comply within the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Per FCC Part 68 requirements, the customer is required to notify the Telephone Company prior to disconnecting any CSU from the network interface.

The FCC registration number for Access System2000 is GICUSA-18804-DE-N.

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Access System 2000 Test System 2000

These *Release Notes* describe the Verilink® Test System 2000 for Access System 2000. These *Release Notes* include the following information:

- Product description
- Compatibility and requirements
- Software installation instructions
- TS2000 test set firmware download instructions
- TS2000 Start-up instructions
- TS2000 deinstallation instructions

(For information on operating TS2000, see TS2000 online **Help** that is integrated with the product.)



*These release notes assume you are already familiar with the standard AS2000 products, including AM2000, and standard hardware communications analyzers. For more information, see **Related Verilink manuals**, below)*

Related Verilink manuals

Refer to the following AS2000 documents for more information.

- *Access Manager 2000 User Manual*
- *AS2000 Overview Manual*
- *AS2000 Installation Manual*
- *AS2000 New Features Manual*
- *AS2000 Operation and Maintenance Manual*
- *AS2000 Release 1.5 Upgrade Instructions*

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- *AS2000 Release 1.5 Features Release Notes*
 - *ASCII Terminal Operation Manual*

About TS2000

Test System 2000 (TS2000) is a purely software product that emulates a standalone hardware communications analyzer test set. TS2000 uses an existing AS2000 NCC or TAC module as a test engine by supplementing the module's firmware with TS2000 test code downloaded into the CSU chip onboard RAM.

TS2000 provides a color graphical user interface (GUI) that runs in Microsoft Windows on a PC attached to the host AS2000 module via a COM port. The PC can also be connected to an AS2000 node via a modem-to-modem link.

The TS2000 GUI provides a simulated real-time display of test modes, patterns, and results, alarm conditions, and loopback status. TS2000 can run tests unattended. Afterwards you can retrieve the logged results from the GUI.

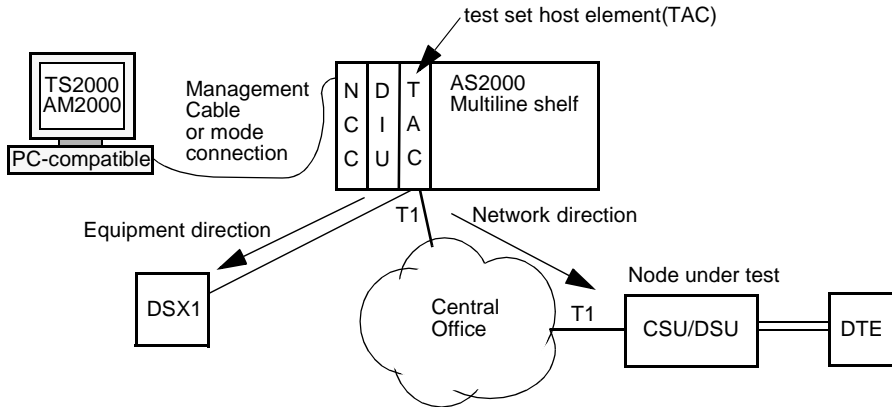
TS2000 works with Access Manager 2000 (AM2000), which supports TS2000 while running in background.

Using the TS2000 GUI, the installer downloads firmware test code provided with the software into the RAM of an AS2000 NCC 2020 or TAC 2010 module. The operator can revert the AS2000 element back to CSU mode through the GUI. TS2000 also reverts to CSU mode when a timed test is completed. The code remains in the RAM of the module for running TS2000 whenever required.

Currently, user data must be taken offline while TS2000 is active in the AS2000 node. TS2000 monitors the circuit between the AS2000 node in which it resides and the far end node, or between the test node. TS2000 performs only test functions. It can, however, set up and take down loopbacks in the far end node.

Figure 1 illustrates an example network configuration using TS2000 installed on a local PC.

Figure 1 Example Configuration of the TS2000 testing a remote CSU/DSU far-end node



TS2000 test set code is downloaded to a TAC host element either via a direct connection or via a modem connection. The circuit under test is a T1 circuit between the TAC and a remote CSU. The TS2000 can test the circuit in the network direction (toward the remote CSU) or in the equipment direction (toward the DSX attached to the test element side of the T1 circuit). TS2000 can put up loopbacks at the far-end or near-end. It can also allow itself to be put into local loopback mode and receive test patterns or errors injected from a standalone test set at the far-end. If the far-end is an AS2000, TS2000 test set code can be installed there also, so that the circuit can be tested from the reverse direction via modem.

Compatibility and requirements

The following requirements are needed to run the Test System 2000:

- AS2000 with an NCC 2020 or TAC 2010.
- The Controller RAM chip (SAM) on the NCC plug-in module (P/N 489-501838-xxx) must be at the revision level of V 4.51 or higher. Your TS2000 product shipment inventory includes a firmware download from the AS2000 Release 1.5 that brings the Controller RAM chip up to V 4.61.

(For details on Release 1.5, see *AS2000 Release 1.5 Upgrade Instructions*.)

(You can locate the Revision number by using the AM2000. For details, see *Access Manager 2000 User Manual*.)

-
- AM2000 Release 3.2A or higher (optional with TS2000 product)
(You can locate the Revision number by using the AM2000. For details, see *Access Manager 2000 User Manual*.)

If you are running SNMP with AM2000, you may need to upgrade SNMP to be compatible with AM2000 Release 3.2A.

- PC (minimum: 386; recommended: 486 or better) with 16 Mbytes of RAM (recommended) and a diskette drive.



CAUTION

Because of resource limitations in the PC and Windows 3.1, Verilink recommends you do not run other applications when running TS2000 and AM2000.

Product shipment inventory

Your TS2000 product shipment includes the following

- 2 to 5 diskettes:
 - 1 TS2000 diskette (contains TS2000 software including the test set code download and TS2000 Online Help)
 - 3 AM2000 diskettes (optional) (AM2000 must be running in background to support TS2000)
 - 1 Controller RAM chip upgrade firmware diskette (P/N 487-501837-XXX V 4.61 or higher)
- TS2000 Release Notes (this document)

Installing the equipment and software

This section describes how to install the software on your PC and download the TS2000 firmware to the plug-in module. You can also select an option in TS2000 to run the TS2000 immediately after download.



Before installing or using the Test System 2000, read the Verilink End-user Software License Agreement.

Overview

This subsection is a summary and overview of the installation. It is provided so that you will have an understanding of overall process. ***The actual step-by-step procedures with details are in following subsections.***

1. Check your product package to make sure you have all the diskettes. You should be prepared with knowledge of the path(s) that you wish to select for the AM2000 and TS2000 if different from the default paths.
2. Set up the PC and Management cable connection.
3. Install AM2000 (if applicable).
4. Start AM2000 and check the configuration of your network, especially of the node you will be using for the TS2000 test set.
5. Download the host node NCC Controller upgrade firmware.
6. Install the TS2000 software from the distribution diskette.
7. Start TS2000 and download the test set code to the host element.
8. Begin using TS2000 to test the installation. Refer to TS2000 Online Help for user information.

Setting up the PC and Windows program

Before you install the software, attach a cable from the desired COM port on your PC to the **Management** port on the rear panel of the host node NCC plug-in module.

If you are doing a remote installation via a modem, make sure the connections are in place between your PC and local modem and the NCC at the remote site. (If you are downloading to a TAC at the remote site, your remote modem is connected to the NCC which controls the TAC through the AS2000 backplane.)

Use your Windows **Control Panel, 386 Enhanced** icon to assure that the 32-bit cache is turned off.

1. In the **386 Enhanced** dialog box, click the **Virtual Memory** button. (The **Virtual Memory** dialog box appears.)
2. Click on the **Change** button. (The expanded dialog box appears.)
3. Make sure the **Use 32-Bit Disk Access** box is turned off.

Installing AM2000 (if applicable)

AM2000 is contained on three diskettes.

The following instructions assume you are installing from the **A:** drive to the **C:** drive. Access Manager can be installed on any local hard disk in your system.

You can press **F1** to display the **Help** screen at any time during the installation. The options to go back one step or to abort the installation are always available.

1. **Initialization.** From the **File/Run** menu in the Windows Program Manager, select

A: \SETUP . EXE

The Access Manager initialization screen appears, followed by a welcome screen. **Setup** informs you that your Windows **SYSTEM . INI** file can be modified during the installation procedure.

2. **Select destination path.** The default destination path for all system files is **C: \AM2000**. Access Manager can be installed anywhere on your hard drive.

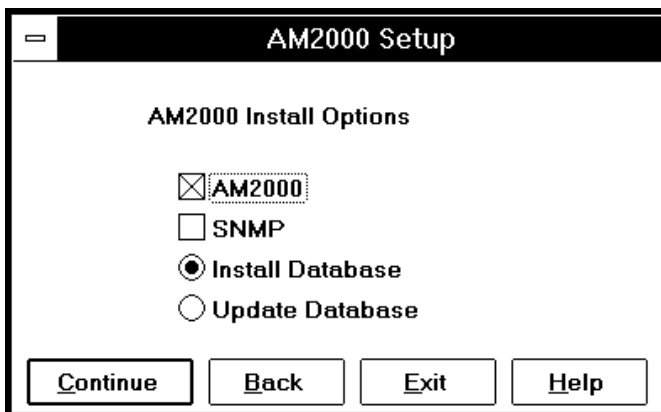


WARNING

If files currently exist in the directory stated, they may be overwritten.

3. **Installation options.** As shown in the example dialog box, select AM2000.

Figure 2 Access Manager 2000 Installation Options



The following three options are available for the database installation:

- a. **Install Database:** The default setting installs a completely new database, destroying any existing database information in the install directory. Choose this option for first time installations.
 - b. **Update Database:** Installs a new database schema, but upgrades any existing database information for compatibility with the new schema.
 - c. **No active selection:** Keeps the existing database. This option is valid only if the existing database schema is compatible with any new system files being installed.
4. **Enter existing database path.** If an existing database is to be upgraded, you must enter the path of the existing database.

-
5. **Check available disk space.** The install program checks that there is enough free space on the hard disk to install the required files, and if **Update Database** is selected, to convert the existing database into the new schema.

If there is not enough disk space, **Setup** displays the installation selection screen again so you can change your selection or abort the installation.

If you have sufficient free space on your hard disk, and the existing database is in the same directory as the selected install directory, the install program copies the existing database into the **C:\dest\DBOLD** directory before installing the new database schema. The original database is not be destroyed.

6. **Installation.** The relevant files are now be copied from the installation disk(s) to the specified directory on the hard drive.
7. **SYSTEM.INI modification.** If you have chosen **AM2000**, the **SYSTEM.INI** file is modified.



WARNING

AM2000 assumes it is the only application resident on the PC. The modifications made by AM2000 overwrite both CONFIG.SYS and AUTOEXEC.BAT

8. **System files modification.** For AM2000, both the **AUTOEXEC.BAT** and **CONFIG.SYS** files are likely to require modification. You should choose to make necessary changes manually. If you choose to update these files manually, use **AUTOEXEC.AM** and **CONFIG.AM** in your installation directory (**C:\AM2000**) as a guide for the changes that you need to make.
9. **Database update.** If the existing database is to be updated, the update process is displayed. The update process reports to the screen whether it was successful or not.

If the update fails, **Setup** reports the failure. However, all the preceding installation options will have been carried out successfully. Therefore, you need only repeat the **Update Database** option.

-
10. **Successful installation.** Setup displays a message when the installation completes successfully. For a first-time installation, a new program group is created in Windows, containing the Access Manager icon.
 11. Find Windows `system.ini`. Look in the category **386 ENH**, **GfMaxDosComPorts=<n>**. Edit **n** to equal the number of COM ports on your system plus 2. For example, if your system has two COM ports, make **n = 4**.

Using AM2000 to configure your system for use with TS2000

AM2000 must be running in background before you start TS2000, which uses the AM2000 database logins, passwords, node addresses, and data logging.

1. Start up AM2000.
2. In the AM2000, configure the COM port under the **Edit comline definition** selection under the **Utilities** menu.
3. Make sure you have a valid entry for the node to which you are going to download the TS2000 test code.
4. Disable polling for the node that is to be the host node for the TS2000 test set code. (Polling can cause interference.)

(For more information on using AM2000, see *Access Manager 2000 User Manual*.)

Downloading the Controller RAM upgrade

Before you install TS2000, you should have already upgraded the Controller RAM chip on the NCC that you have selected to be the host element for your test set. (If you are using aTAC as the TS2000 test set host, you still should perform the download to the NCC in the AS2000 node.) This assures that the node is compatible with TS2000. (See the previous subsection, *Compatibility and requirements*.)

Using AM2000, download the V 4.61 firmware to the node NCC. (See the README file on the firmware diskette.)

(For more information on using AM2000 for downloads, see *Access Manager 2000 User Manual*. For more details, you can also refer to upgrade instruction in the *AS2000 Release 1.5 Upgrade Instructions*.)

Installing TS2000

Install TS2000 software on your PC from the TS2000 distribution diskette as follows.



TS2000 software usually does not have its own directory. It usually resides in the same directory as your installation directory for AM2000.

1. From the **File/Run** menu in the Windows Program Manager, select:

A: \SETUP.EXE

2. Select the TS2000 default installation path:

C: \AM2000

where **C: \AM2000** is the default path. If you have installed AM2000 in a different directory substitute:

C: \<path_of_AM2000>

Verilink recommends you install TS2000 in the AM2000 directory. However, you can select an alternative path for TS2000. If so, perform the following step 3.

3. If you select an installation path for TS2000 different from that of AM2000, you must inform TS2000 of the path for the AM2000 database, which TS2000 uses. (The AM2000 database is located in the AM2000 directory.) Modify **AUTOEXEC.BAT** to include the default path of AM2000:

```
c:> SET DBDPATH=C: \AM2000
```

```
c:> SET DBFPATH=C: \AM2000
```

where **C: \AM2000** is the default path. If you have installed AM2000 in a different directory substitute:

```
C: \<path_of_AM2000>
```

Downloading the TS2000 firmware

The TS2000 code is downloaded into the RAM onboard the CSU chip of the NCC or TAC element. The CSU RAM remains executable provided the battery is good and battery supply has not been interrupted. The **Firmware Services** dialog box in the TS2000 GUI allows you to:

- download a selectable version of the code from a selectable directory
- revert the host element to CSU mode (EPROM code)
- run selectable versions of the code immediately after download or on demand

The **Select CSU Element** dialog box allows you to select the shelf and slot number of the NCC or TAC for the above activities

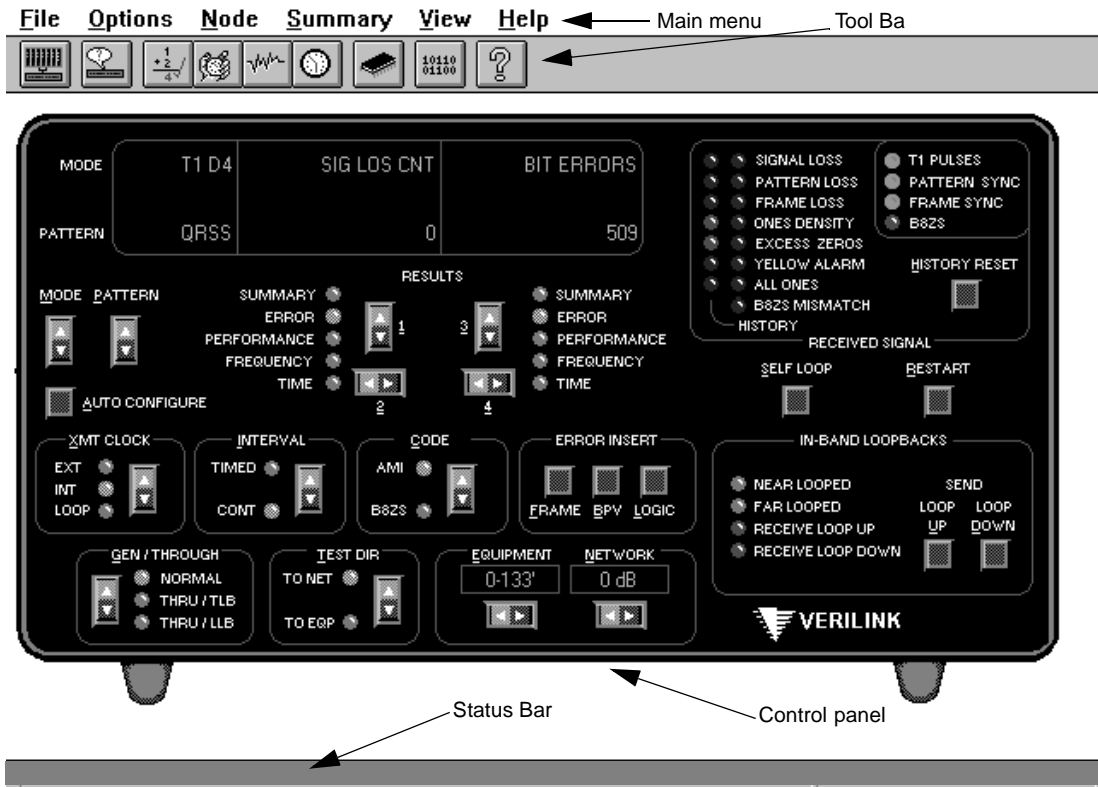
Procedure for downloading TS2000 firmware

(AM2000 must be running in background before you start TS2000.)

1. Start up TS2000 from Windows. The User Authorization dialog box appears. Enter your name and tab to the password box. Enter your password and press Return. (The authorized username and password must have been previously entered in the AM2000 database.)

The TS2000 main display window including the main menu appears as shown in Figure 3.

Figure 3 TS2000 Main Display Window with Control Panel, Main Menu, Tool Bar, and Status Bar



2. To select an AS2000 node for downloading the TS2000 firmware, display the **Select AS2000 Node** dialog box as follows:



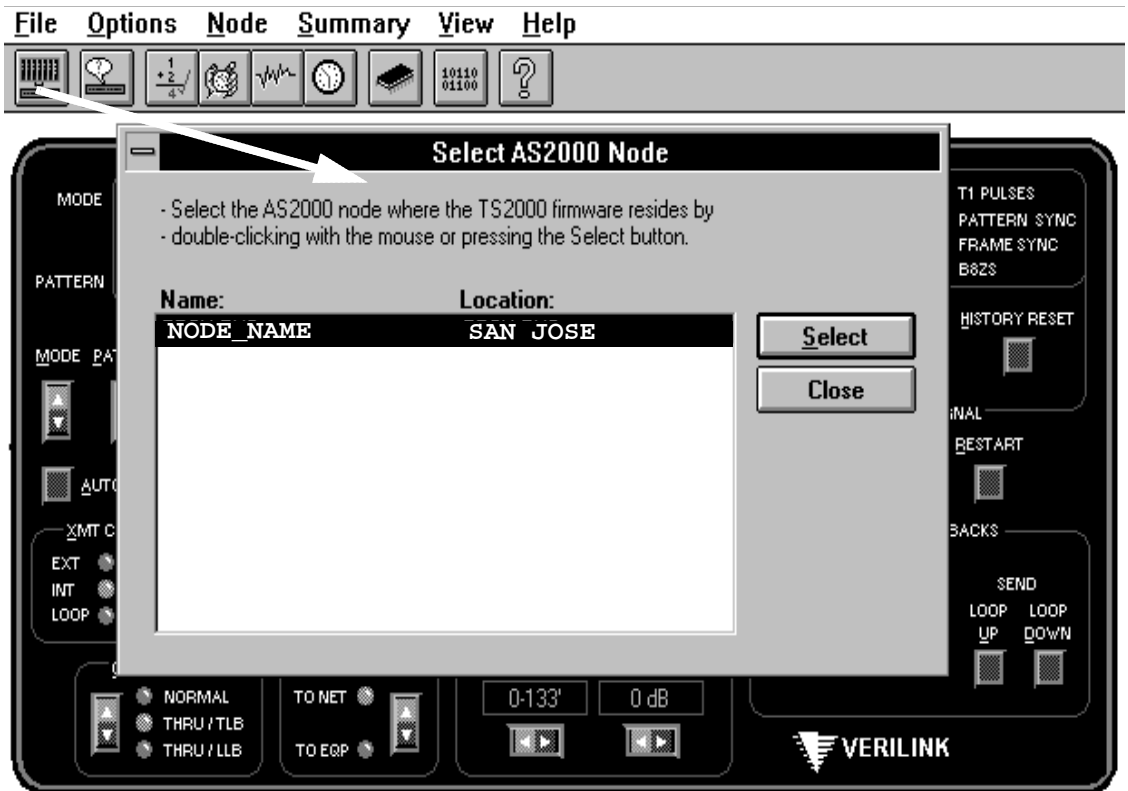
a. From the main menu, click on **Node**

or

from the Tool Bar, click on the first button, the **Node Select** button.

The **Select AS2000 Node** dialog box appears as shown in the following example illustration.

Figure 4 Select AS2000 Node Dialog Box

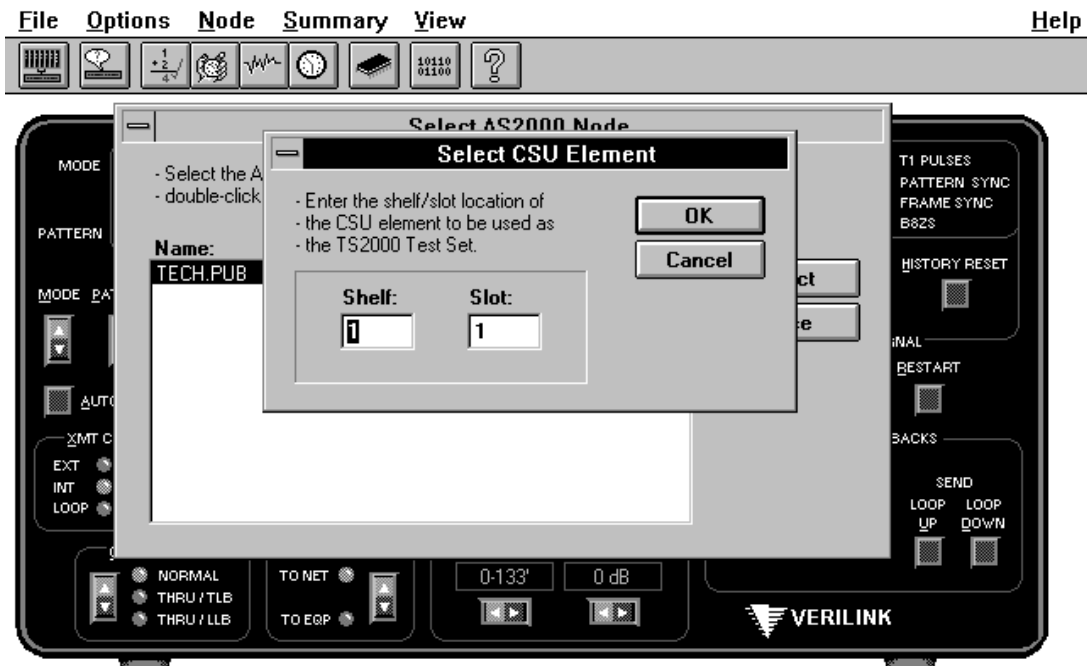


b. In the **Select AS2000 Node** dialog box, highlight to select the target AS2000 node and click on the **Select** button. (You can also type **Alt-S** as indicated by the underline in the **Select** button label.)

(You can also select the node by double-clicking on the node entry.)

In response, the **Select CSU Element** dialog box appears.

Figure 5 Select CSU Element Dialog Box



- c. In the **Select CSU Element** dialog box, select the shelf and slot numbers of the target element by editing the **Shelf** and **Slot** edit boxes as appropriate.
- d. Click on the **OK** button.

Both of the above **Select** dialog boxes disappear. The AS2000 control panel reappears, as shown in Figure 3. If the connection is successful, the status bar at the bottom of the TS2000 screen displays the message:

Connected to node: <name_of_selected_node>

(If you get a time-out or a message saying connecting attempt failed:

- a. Check your cable connection between the PC and the host element.
- b. If the cable is OK, then make sure you have selected a valid node in AM2000

c. If both of the above check out OK, you can also check to see if the Management cable connection corresponds to the selected COM port.



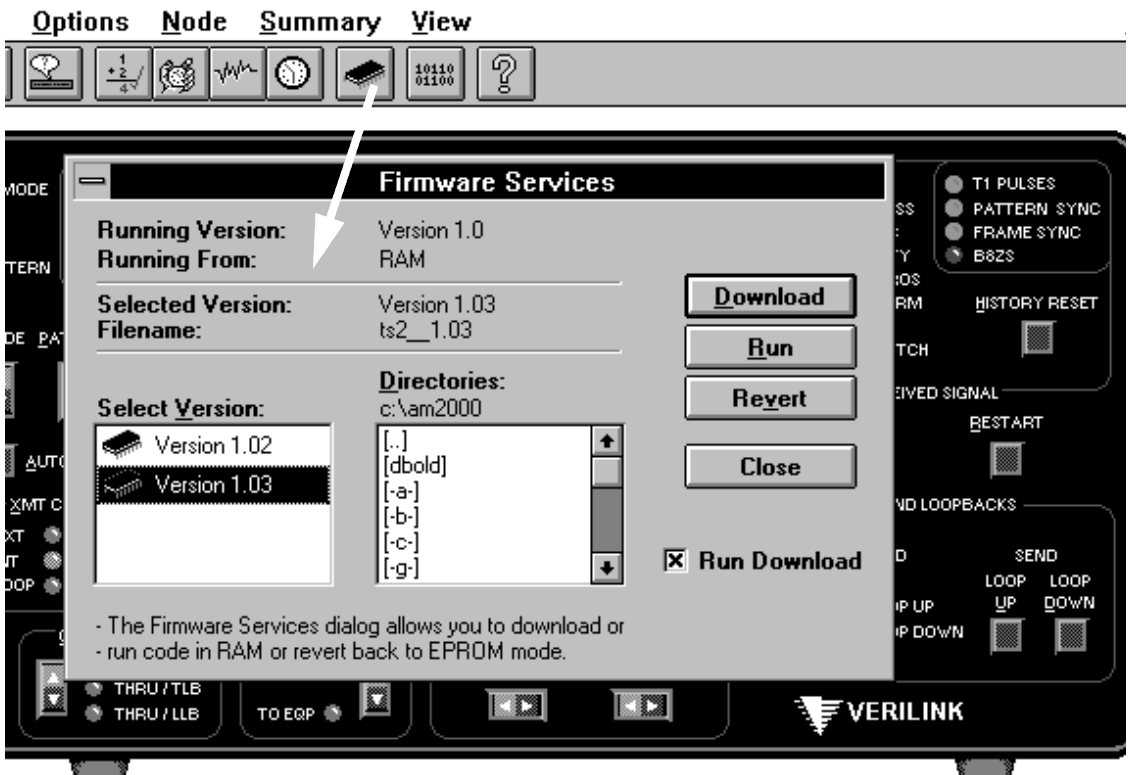
3. To download the Test System 2000, click on the EPROM symbol button on the toolbar

or

Pull down the **Options** menu on the main menu and select **Firmware Services**. (See Figure 3 for picture of the main menu.)

The **Firmware Services** dialog box appears as shown in Figure 6.

Figure 6 Firmware Services dialog box



The **Select Version:** list box displays the version(s) of the download code. The **Directories:** scroll box allows you to select the path of the file if different from the default.

-
4. To download the test set code:
 - a. Select the desired version by highlighting it.



Verilink recommends you delete any obsolete earlier release versions of TS2000 you may have. If you have more than one version in the path, they will show up in the dialog box scroll box. You must be sure you have highlighted the correct version. The scroll box highlight defaults to the top item.

- b. Click the **Download** button. (You can also type **Alt-D** as indicated by the underline in the button label.)
 - or

Double-click on the version entry in the **Select Version** list box.

During the download, the status bar displays a running count of the progress of the download in pages together with the final number of pages. When the download completes successfully, an alert box pops up to acknowledge success.

When the test set code is running normally, the toolbar items that were previously grayed out now light up in their normal colors to indicate that the control panel is active. Indicator lights on the control panel will also illuminate.

Running TS2000 from Firmware Services dialog box

In the **Firmware Services** dialog box, the **Run Download** check-box below the buttons is on by default. This means that the downloaded coded will be executed immediately after the download is completed.

(For information on operating TS2000, see TS2000 online **Help**.)

Other options in Firmware Services dialog box

From the **Firmware Services** dialog box, you can

- manually revert the CSU element to its normal CSU mode
- run previously downloaded code that is still present in the host element that has been reverted to CSU mode.
- download the test set code or download a different/later version

Reverting to CSU mode

There are two ways to revert the host element to CSU mode: manual and automatic. To manually revert the CSU element to its normal CSU mode, click on the **Revert** button in the **Firmware Services** dialog box, and close the dialog box. (The test set code remains in RAM unless reset.)

In the **Configure** dialog box, there is a checkbox that you can use to automatically revert the CSU element to CSU mode upon exit from TS2000. (You call up the **Configure** dialog box by clicking on the second toolbar button or by pulling down the **Options** selection on the main menu. See TS2000 online Help for more information.) If you turn it on and exit TS2000, the test set code remains in RAM unless reset, but the host element reverts to CSU mode.

Running TS2000 on a previously reverted CSU

When you have disconnected from a node which contains the test set code and then exited from TS2000, when you restart TS2000, you must select the test node and CSU element again.

If you have previously reverted the host element to CSU mode, you must return to the **Firmware Services** dialog box. Select the correct code version, if you have more than one version appearing in the **Select**

Version scroll box. (The correct version should be the one you previously downloaded. The code you select must have been previously downloaded and present in RAM. Only one version of the firmware can be present in RAM at a time.)

Click the **Run** button.

(You can also type **Alt-R** as indicated by the underline in the **Run** button label.)

The grayed out Tool Bar icons colorize to indicate the TS2000 main display window is running again.

Operating and using TS2000

For detailed information on operating and using TS2000, see TS2000 online **Help**. TS2000 online **Help** works like other Windows applications that uses WinHelp. You can access Help any of the following ways:

- Click on the **Help** icon in the TS2000 **Tool Bar**.
- Select **Help** from the Main menu.
- Press F1 while you are in a dialog box or have a main menu selection pulled down.

Once inside the TS2000 Help window, you can navigate through the topics and **Glossary** using the Help screen navigation buttons in the Tool Bar.



AM2000 does not identify TS2000.

The Equipment jacks on the front panel of the NCC and TAC are not at DSX level.

Removing TS2000

If you need to deinstall or reinstall TS2000, completely remove the following TS2000 files from the installation directory:

`ct13d.dll`

`logfile.out`

`rdm330.dll`

`ts2000.exe`

`ts2000.hlp`

`ts2__1.03`



Responsive by Design

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