TEXAS INSTRUMENTS

Guide to TI-Navigator™ with the TI-73 Explorer™

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TI-Navigator™ for the TI-73 Explorer™

Welcome to TI-Navigator™ for the TI-73 Explorer™!

The TI-Navigator™ classroom learning system provides the hardware and software tools you need to set up a wireless classroom network. TI-Navigator™ lets you:

- Create and manage classes on the classroom network.
- Transfer files between your computer or calculator and your students' calculators.
- Monitor your students with screen captures and polling.
- Perform various interactive activities with your students to enhance your lessons.
- Use different tools to create, distribute, and analyze educational content.
- Install TI Graphing Calculator Applications (Apps) on your students' calculators.

The TI-Navigator™ classroom learning system can help you:

- Assess student understanding.
- Verify that students are on task.
- Use classroom results to engage students.
- Get immediate feedback from your students to promote student achievement.

TI-Navigator™ System Components

The system is composed of two parts, hardware and software. The hardware creates a wireless communications network so that your computer can communicate with your students' TI graphing calculators.

The software contains a number of tools to enhance your classroom, including:

- **Activity Center.** Lets you run interactive activities with your classes involving lists, graphs, points, and equations.
- **Quick Poll.** Lets you send polls to your students, receive the students' responses to the polls, and review the poll results with your students.
- **Screen Capture.** Lets you capture your students' calculator screens.

- **Class Analysis.** Lets you create, distribute, and analyze educational content.
- **App Transfer.** Lets you transfer TI Graphing Calculator Applications (Apps) to students' calculators.
- **Transfer tools.** Multiple tools that let you send, collect, and delete data files on your students' calculators.

TI-Navigator™ software has two main components that make it work:

- TI-Navigator™ computer software. The TI-Navigator™ computer software contains the tools and options you need to run your wireless classroom network.
- TI-Navigator™ calculator software. The TI-Navigator™ calculator software contains the tools you and your students need to exchange information with each other through the TI-Navigator™ network.

This guide provides basic information about TI-Navigator™ software, including information on both the computer software and the calculator software. For information about the TI-Navigator™ hardware, refer to the Installation Guide or the *Getting Started* poster included in the TI-Navigator™ packaging.

TI-Navigator™ System Requirements

- Windows® XP Professional with Service Pack 1 or Service Pack 2 installed or Windows® 2000 with Service Pack 4 installed
- 700 MHz Pentium-compatible CPU (1.2 GHz recommended)
- Video adapter set at 1024 x 768 screen resolution
- 256 MB RAM
- Approximately 350 MB of available hard-disk space (to install TI Connect™, TI- Navigator™, Network Manager, Class Analysis, and LearningCheck™ Creator)
- CD-ROM drive
- Available Ethernet or USB port on the computer
- Internet Explorer version 5.5 or higher (installed and operational)

Getting started

This guide is designed to get you up and running quickly with TI-Navigator™ for the TI-73 Explorer™.

- You will use the *Getting Started* poster to install the software on your computer and set up the network.
- You will use this guide to update the software on your TI-73 Explorer™ calculators.
- You should keep this guide as a reference to the exceptions from the other documentation that are unique to the TI-73 Explorer™.

There are several other tools available to help you learn to set up and use the TI-Navigator™ system:

- The *Getting Started* poster—a short version of the setup process with fewer details.
- The *Installation Guide* (provided in both printed and PDF formats)—complete setup details, troubleshooting, and technical information.
- Online Help—After you install the TI-Navigator™ software on your computer, you can access Online Help from the Help menu.
- The *TI-Navigator™ Reference Guide*, a printed version of the Help.

The process of unpacking the equipment, setting up the hardware, and installing the software will probably require about two hours of your time.

Setting up your computer

Use the *Installation Guide* or the *Getting Started* Poster in the TI-Navigator™ packaging to install the TI-Navigator™ software on your computer. You must install the software on your computer before setting up your calculators, as you will need to transfer software from the computer to your calculators.

Setting up the TI-Navigator™ hardware

Use the Installation Guide or the *Getting Started* Poster in the TI-Navigator™ packaging to set up the TI-Navigator™ hardware.

Setting up your calculators

Use this guide to complete the initial set up of your calculators. You must install the software and hardware on your computer before setting up your calculators.

Before installing TI-Navigator™ on your TI-73 Explorer™, you must verify that you have:

- Operating System (OS) 1.80 or higher
- Enough memory to store the required applications.

Determining the operating system version

To determine which version of the operating system is installed on your TI-73 Explorer™:

1. On your calculator, press [2nd] [MEM].

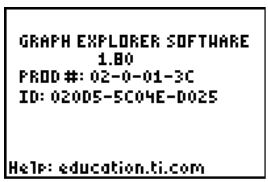
   The memory menu opens.

2. Select **1: About.**

   The About screen opens.

   If the OS version displayed is 1.80 or higher, proceed to the steps for verifying memory space.

   If the OS version is not 1.80 or higher, follow the steps below to update the OS on your calculator.



Updating the operating system

If the operating system on your calculator is not version 1.80 or higher, you can use TI Connect™ software to transfer an updated OS file from your computer to your calculator. Both TI Connect™ and the TI-73 Explorer™ OS file are included on the TI-Navigator™ CD.

1. Insert the TI-Navigator™ CD in your computer's CD-ROM drive. The menu to the CD opens automatically.
2. Click the Calculator Software link and navigate to OS software for the TI-73 Explorer™.
3. Connect the TI-73 Explorer™ to your computer's USB port using the USB Silver Edition cable.
4. Drag and drop the **TI-73 OS.73u** file onto the TI Connect™ icon on your desktop.

The operating system transfers to your calculator.

Note: You can transfer any file, not just the OS, to the calculator using this method.

Verifying memory space

Before installing TI-Navigator™ applications, you must verify that you have enough free memory space on your TI-73 Explorer™.

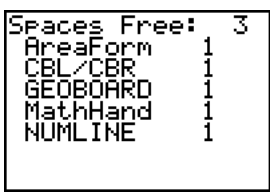
Applications on the device take up blocks of memory called "application slots." The bigger the application, the more slots it will require. The TI-Navigator™ applications (LearnChk, NavNet, θAlgACS, θnavstk) require a total of five application slots. The TI-73 Explorer™ has a total of eight application slots.

1. On your calculator, press [2nd] [MEM].

   The memory screen opens.

2. Select **3: Check APPs.**

   The calculator displays how many slots are free, and how many slots each of the existing apps require.



   If there are five or more free slots, proceed to the steps for transferring applications to your calculator.

   If there are fewer than five free slots, you must remove applications from your calculator to make space for the required TI-Navigator™ applications. You can save the applications you remove to your computer, or delete them.

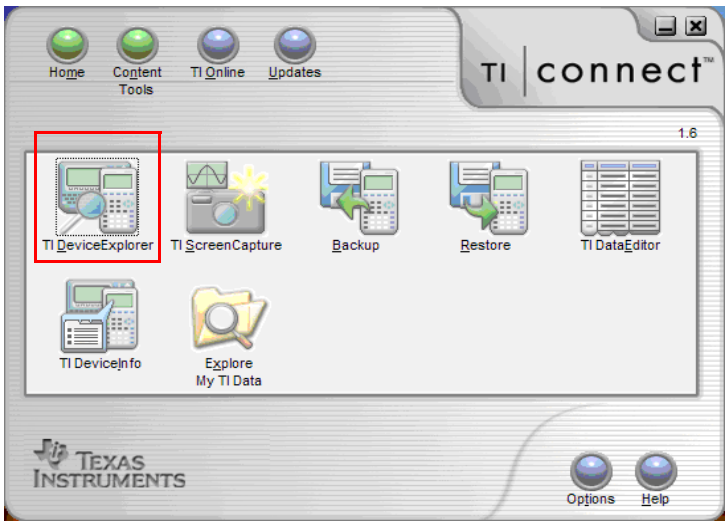
Saving applications to your computer

If you need to remove an application to make space on your calculator, you can save a copy on your computer, for use at a later date.

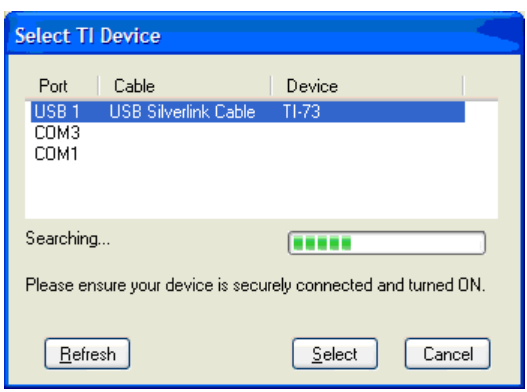
1. Double-click on the TI Connect™ icon.

   The TI Connect™ software opens.

2. Click the Device Explorer icon.



3. If prompted, select the TI-73 device and click **Select**.

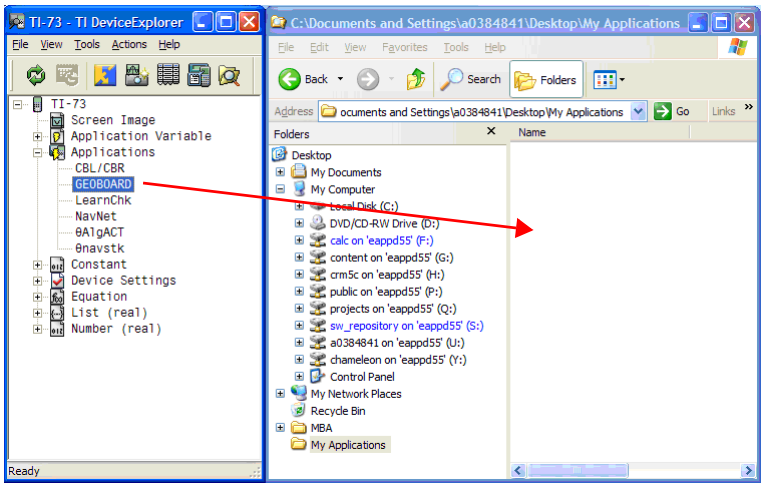


   The Device Explorer window opens.

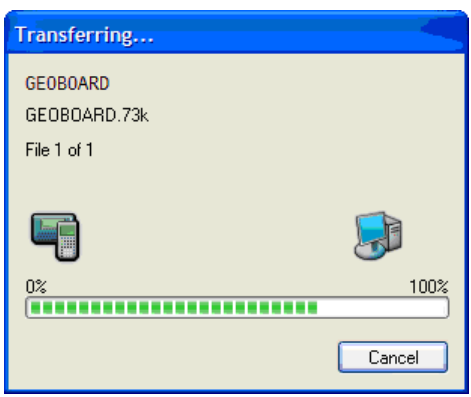
The Device Explorer window displays a tree view of the files on your calculator.

4. Expand the Applications directory to see the applications that are installed on your calculator.

5. Drag the application you want to save from the Device Explorer window, and drop it onto your desktop or open Windows® Explorer and drop it into a directory.



When you drop the application file onto a location on your computer, a transfer status screen displays.



When the transfer is complete, the application will be saved with a .73k file extension in the location you selected when dropping the file.

Deleting applications from the calculator

Until you have TI-Navigator™ installed and configured, you must perform these steps for each calculator on an individual basis. Once TI-Navigator™ is installed and configured, you can delete applications from all of the calculators in a class set using the network.

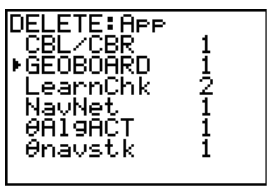
1. To remove an application, press [2nd] [MEM] to open the memory screen.
2. Select **4: Delete**.

   A list of file categories displays on the screen.

3. Select **8: APPs**.

   A list of Apps installed on the calculators opens.

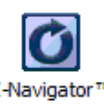
4. Select the App you want to delete and press [ENTER].



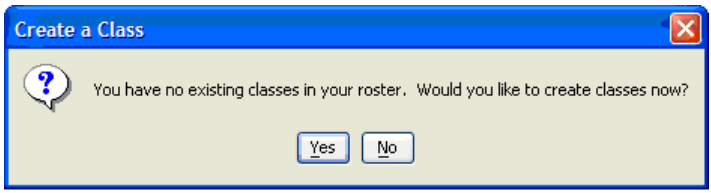
Transferring TI-Navigator™ applications to the calculator

Once you have cleared an adequate number of memory slots for all your calculators, you are ready to transfer the applications to an entire set of calculators at one time using the TI-Navigator™ software on your computer.

1. Start the TI-Navigator™ software by double clicking on the TI-Navigator™ icon on your computer's desktop.



   When you first open the TI-Navigator™ software, it asks if you want to create classes.

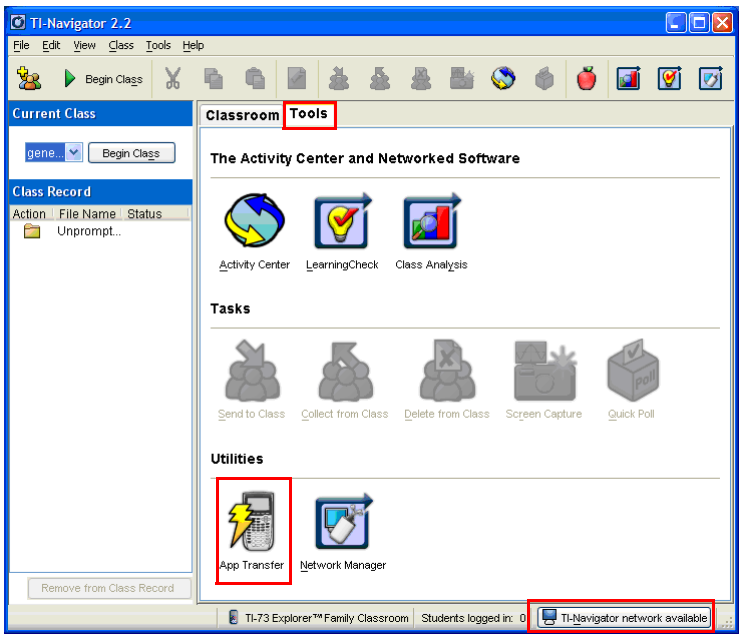


You do not have to create a class to transfer applications. Refer to the "Creating a Class and Adding Students" video and tour in the Tour and Lesson section of the TI-Navigator™ CD for more information about setting up your classes.

2. Click **No** to continue to transfer applications.

   The TI-Navigator™ home screen opens.

3. Make sure your network is available and connect the calculators to the hubs (refer to the *Getting Started* poster or the *Installation Guide* for detailed information).



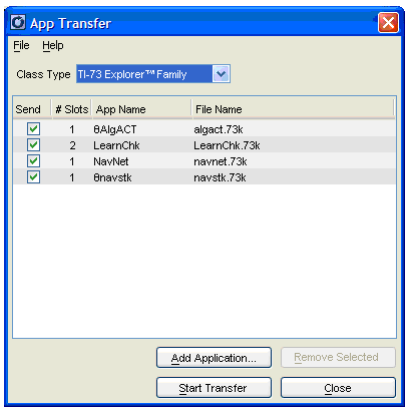
4. Select the **Tools** Tab and click on the Apps Transfer Tool.

   The four applications that you need to send to the calculators (LearnCheck, NavNet, θAlgACT and θnavstk) are already loaded and ready to transfer.

If you do not see the four applications listed, they can be added to the list by clicking on the **Add Application** button and selecting the app files from the C:\Program Files\TI Education\TI-Navigator directory.

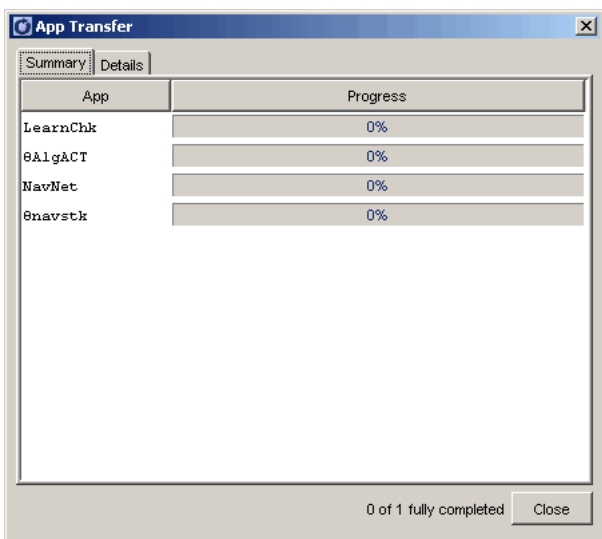
The four application files to select are: navnet.73k, algact.73k, navstk.73k, LearnChk.73k.

Important: Make sure that TI-73 Explorer™ Family is the selected Class Type.



5. Click **Start Transfer**.

   The App Transfer progress window opens.



Once the transfer is complete, you're ready to start using TI-Navigator™!

Refer to the TI-Navigator™ *Reference Guide* and online Help for everything you need to know about using the TI-Navigator™ classroom learning system.

TI-Navigator™ 2.2 CD

Keep the TI-Navigator™ 2.2 CD handy. It contains information to help you be successful with using TI-Navigator™.

You will find Videos, Tours of the Software, and Sample Lessons (with activity setting files), including:

- Setting up your Class
- Transferring Files and Monitoring Status
- The Activity Center
- Polling
- Screen Capture
- Activity Lessons
- Upgrading Support

Installers for other applications are located in the section of the CD called Computer Software. You will want to make sure you have the latest version of these applications:

- LearningCheck™ Creator Software
- StudyCards™ Creator Software
- TI Connect™ Software

Frequently-asked questions

What is different when using TI-Navigator™ with the TI-73 Explorer™?

The TI-73 Explorer™ can perform all of the same TI-Navigator™ functions as the TI-84 Plus with the following exceptions.

Activity Center notes

- In Activity Center, The TI-73 Explorer™ can submit four equations at a time, not ten.
- The functions available on the TI-84 Plus versus the TI-73 Explorer™ differ slightly. Functions that are available in Activity Center on the TI-73 Explorer™ include:
  - sin(
  - cos(
  - tan(
  - Arcsin(
  - Arccos(
  - sqrt(
  - abs(
  - int(
  - ln(
  - exp(
  - log(
  - rand
  - PI

LearningCheck™ Creator and Class Analysis notes

Can I use LearningCheck documents created for the TI-83 Plus or TI-84 Plus?

You can use any existing LearningCheck™ Creator .edc files with the TI-Navigator™ 2.2 software. There are, however, some exceptions when using LearningCheck™ Creator and Class Analysis with the TI-73 Explorer™. These exceptions are noted below:

- Send to Device does not work in LearningCheck™ Creator (use Send to Class).
- To enter text, you must press 2nd [TEXT] menu on the TI-73 Explorer™.
- The TI-73 Explorer™ does not support the TI keyboard.
- Student answers are saved in an answer file. When this answer file is collected directly from the calculator to the computer, it has a .73v extension. However, Class Analysis will only load .8xv files.

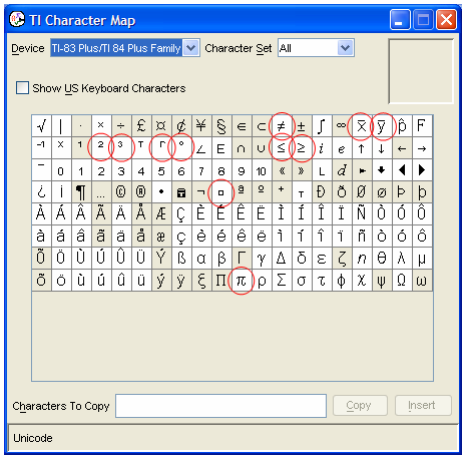
  When you collect an answer file from students, TI-Navigator™ handles the class type discrepancy by saving two versions of the students' answers on the computer. One will have a .73v extension (which can be returned to a device) and one will have a .8xv extension (which can be used in Class Analysis).
- If you collect an answer file outside of TI-Navigator™ through other tools such as TI Connect™, you collect only a .73v file as expected. However, you will not be able to analyze these files in Class Analysis.
- All text entered on the TI-73 Explorer™ is upper case. If you create questions that require a case-sensitive answer, correct answers may be marked incorrect.
- All characters in LearningCheck™ Creator's character palette and all characters on a standard computer keyboard will display on TI-73 Explorer™ in question text, section text and fill-in-the-blanks pull down.
- Fill-in-the-blank text supports a limited character set. You should be careful not to create a question requiring a correct answer that is impossible to create on the device.

  From the computer keyboard, the following characters are NOT available on the TI-73 Explorer™:

  - | (vertical pipe)
  - ` (accent mark)
  - \ (backward slash)
  - ~ (tilde)

- @ # $ &
- _ (underscore)
- ; (semi colon)

On the character palette provided by LearningCheck™ Creator, these are the ONLY characters also available on the TI-73 Explorer™:



Why do I get a Communication Failure sometimes even though I am plugged in?

If you get a failure to communicate on the calculator, it probably means that two things were trying to happen at once. For example, if you take a screen capture while someone is logging in, you may have to refresh screenshots. Simply retry on the calculator or computer.

Why do some of my students miss a "Force to Students"?

If the teacher forces a transfer and the calculator does not automatically receive the file, the file is still there waiting for the student. From the TI-Navigator Home screen on the NavNet App, the calculator user simply selects **3. TRANSFERS → 1. AUTO SEND/RECV** to request any files waiting for them.

How do I do things off the network during a class session?

If the calculator user is going to disconnect from the network (example: to do a CBR™ collection), the calculator user will need to exit NavNet before disconnecting. Not doing so will not harm the system but the user may have to login again when accessing NavNet.

Can I use TI-Navigator without the Access Points and Hubs?

You can use the system with a calculator connected to the computer through the USB Silver Edition cable. This is great for trying out lessons when you are lesson planning without having the network set up.

Why do I get errors in TI Connect when I have TI-Navigator™ open?

You cannot use the USB Silver Edition cable with TI Connect™ software and TI-Navigator™ software at the same time. If you want to use TI Connect™ software to communicate with a calculator, TI-Navigator™ software must be closed.

How many apps slots will TI-Navigator™ require?

The TI-73 Explorer™ has eight available app slots. The TI-Navigator™ apps will take three of these, while LearningCheck will take an additional 2. This leaves three app slots for other applications. For example, you can fit NumberLine, Geoboard, and the CBL/CBR app in addition to the TI-Navigator™ applications.

Can you have a mixed classroom of TI-73's and TI-83's or TI-84's?

No, you need to assign each class a device type. This can either be the TI-73 Explorer™ or a mixed classroom of TI-83 Plus and TI-84 Pluses.

Can I change the device that my class uses?

No. The best way to enable a class to use a different device is to create a new class, and then copy and paste the students from the original class to the new class of a different calculator family. This will result in two identical classes -- one for the TI-73 Explorer™ Classroom and one for the TI-83 Plus/TI-84 Plus Classroom.

Will TI-Navigator require an OS update?

The TI-73 Explorer™ requires an OS update to run TI-Navigator™. The new version is 1.80. If you do not have this version, you can download it from the TI-Navigator™ 2.2 CD to the TI-73 Explorer™ with the TI Connect™ software.

Will the TI-Navigator™ functions in TI InterActive!™ software work with the TI-73 Explorer™ ?

No. TI InterActive!™ software was not designed to work with the TI-73 Explorer™.

Texas Instruments Support and Service

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International information:	education.ti.com/international

For technical support

KnowledgeBase and support by e-mail:	education.ti.com/support
Phone (not toll-free):	(972) 917-8324

For TI-Navigator™ technical questions

E-mail:	ti-navigator@ti.com
Phone:	(866) TI-NAVIGATOR / (866) 846-2844

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Customers in the U.S., Canada, Mexico, Puerto Rico and Virgin Islands: Always contact Texas Instruments Customer Support before returning a product for service.

All other customers: Refer to the leaflet enclosed with this product (hardware) or contact your local Texas Instruments retailer/distributor.

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