



English

TI-GRAPH LINK™

FOR WINDOWS™ AND MACINTOSH®

FOR the TI-83/92

CONDENSED GUIDEBOOK

Guidebook developed by:
Texas Instruments Instructional Communications

Note: The contents of this guidebook apply to both the TI-83 graphing calculator and the TI-92. The abbreviation "TI-83/92" is used throughout this guidebook to mean "TI-83 and/or TI-92." Differences that exist between the two models are explicitly described where applicable.

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Getting Started with TI-GRAPH LINK for Windows

System Requirements

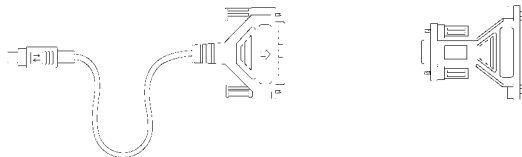
The personal computer used to run TI-GRAPH LINK for Windows must meet the following hardware and software requirements:

- Microsoft Windows version 3.1 or later.
- MS-DOS® operating system version 3.1 or later (MS-DOS version 5.0 or later recommended).
- IBM® AT/PS/2 or 100% compatibles.
- EGA, VGA, or SVGA video board (VGA or better recommended).
- 2 MB available RAM (4 MB RAM recommended).
- At least one 3½-inch diskette drive.
- Hard disk with 1.5 MB available storage space.
- Microsoft mouse (or other compatible pointing device).
- A serial communications port configured as Com Port 1, Com Port 2, Com Port 3, or Com Port 4.

Cable and Adapters

This package includes the following cable and adapters:

- One grey TI-GRAPH LINK cable that connects to a TI-83/92 and works for both Macintosh and IBM-compatible computers.
- One six-inch, 8-pin to 25-pin adapter cable (for the Macintosh).
- One 9-pin to 25-pin adapter (for the PC).



TI-GRAPH LINK for Windows (Continued)

Connecting the TI-GRAPH LINK Cable

To connect the TI-GRAPH LINK cable between your PC and the TI-83/92:

1. Connect one end of the TI-GRAPH LINK cable to the PC serial port you will be using. If necessary, use the 9-pin to 25-pin adapter.
2. Connect the other end of the cable to the port at the top of the TI-83/92.

Important: Push in all connectors firmly.

Installing the TI-GRAPH LINK Software

(Optional) Make a copy of the original diskette and use the copy to load the software.

1. Start Microsoft Windows.
2. Insert the TI-GRAPH LINK for Windows diskette in drive A.
3. From Program Manager, open the **File** menu and choose **Run**.
4. Assuming drive A is your 3½-inch drive, type **a:\setup83** or **a:\setup92**.
5. Press **Enter** and follow the instructions that appear on your display.

The installation software creates an **install.log** file that lists the files which were copied to your system. You can display and read this file using any text editor.

**Starting
TI-GGRAPH LINK
and Testing the
Connection**

1. Open the TI-GGRAPH LINK group on the PC, then double-click on the TI-83/92 program icon to start the application. The TI-83/92 Menu Bar and Edit window are displayed.
2. On the PC, open the **Link** menu and select the communications serial port (Com Port 1, Com Port 2, Com Port 3, or Com Port 4) to which the cable from the TI-83/92 is connected.
3. Re-open the **Link** menu. Select **Get Screen**.
The **Get Screen** window is displayed.
4. Click on **Get Screen**.

The contents of the TI-83/92 display appear in the window indicating that the communications link between the TI-83/92 and the PC is OK.

Note: If you obtain an error message when you click on **Get Screen**, there is a communications problem between the TI-83/92 and the PC.

- Make sure the TI-GGRAPH LINK cable is connected to the correct serial communications port on the PC.
- Make sure all cable connectors are firmly inserted.
- Make sure you have selected the correct serial port, open the **Link** menu and check your current system setting.

5. Click on **Done** to close the window.

**Exiting the
Program**

You can close TI-GGRAPH LINK in either of the following ways:

- Open the **File** menu and select **Exit**.
- Press **Alt+F** and then **X** on the PC keyboard.

TI-GRAPH LINK for Windows (Continued)

Receiving Files from the TI-83/92

To receive items from a TI-83/92 on your PC:

1. Open the **Link** menu and select **Receive....** After a few moments the **Receive TI-83/92 Files** window will display the VAR-LINK contents of the TI-83/92.
2. Select the TI-83/92 folder, choose the item that you want to receive on the PC, then click on **Add**. Repeat this step if you want to receive multiple items, or click on **Add All** to receive all listed TI-83/92 items.
3. (*Optional*) To receive the files to a group, click on **To Group** (☐ means individual files, ☒ means one group file).
4. Click on **OK** when you have selected all the files that you want to receive.
5. Select a directory on the PC in which you want to store the received TI-83/92 items.
6. Click on **OK** when you are ready to receive the files from the TI-83/92.
 - If **To Group** in step 3 is ☒, enter a new file name to replace the default name ***.83/92g**. Retain the default file extension **.83/92g** to remind you that this is a TI-83/92 group file.
 - If a TI-83/92 name contains special characters (such as α or β), TI-GRAPH LINK prompts you to enter a substitute name for the file.
 - If an incoming TI-83/92 item has the same name as an existing file, you are prompted to overwrite, rename, skip to the next item, or cancel without receiving any more items.
7. Select an option. Repeat as necessary until all items have been received.
8. Click on **OK** to return to the desktop display.

**Sending Files
to the TI-83/92**

To send files from your PC to a TI-83/92:

1. Open the **Link** menu and select **Send....**

The **Send Files to TI-83/92** window opens to display a list of TI-83/92 files. Go to the directory in which your TI-83/92 files are located.

2. Select the file that you want to send to the TI-83/92 and click on **Add**. Repeat until all the files that you want to send are listed.
3. *(Optional)* Click on **Retain Folder** if you want to send the files back to their original folders on the TI-83/92 then proceed to step 6.
4. Click on **OK** when you have selected all the files that you want to send.

The **TI-83/92 Destination Folder** window is displayed.

5. Click on the TI-83/92 folder to which you want to send the files.
6. Click on **OK** to transmit the files.

The **Sending Files to TI-83/92** window will display a list of the files that were received by the TI-83/92.

- If a file from the PC has the same name as an existing TI-83/92 item, you are prompted to overwrite, rename, skip to the next item, or cancel without sending any more items.
 - If a file is locked on the TI-83/92, you will be prompted to skip to the next item, rename the file, or quit without sending any more items.
7. Select an option. Repeat as necessary until all items have been sent to the TI-83/92.
 8. Click on **OK** to return to the desktop display.

TI-GRAPH LINK for Windows (Continued)

About Lab Reports

Lab reports apply only to the TI-92. They are not available on the TI-83. A lab report on the TI-92 is a text file that can include print objects such as saved graphs or functions.

Obtaining a Lab Report from a TI-92

To obtain a lab report from the TI-92:

1. Open the **Link** menu and select **Get Lab Report**.

The **Receive TI-92 Text File as Lab Report** window will display a list of available lab reports on the TI-92.

2. Select a lab report file name and click on **OK**.

The **Target Desktop Lab Report File** window is displayed.

3. Select the directory in which to save the file.

4. Enter a file name and click on **OK**.

The **Receiving TI-92 Files for Lab Report** window is displayed and indicates when the operation has been completed.

5. Click on **OK** to return to the desktop display.

Note: For information about creating lab reports, see Chapter 16: Text Editor, "Creating a Lab Report," in the *TI-92 Guidebook*.

Printing a TI-92 Lab Report

To print a lab report that has been received from the TI-92:

1. Open the **File** menu and select **Print**.
2. Select the file filter for lab reports ***.92r** and click on **OK**.
3. Select the file that you want to print and click on **OK**.

**Printing
Opened
TI-83/92 Files**

To print a TI-83/92 program or data file that is displayed in an Edit or Data window:

1. Open the **File** menu and select **Open**. Go to the directory in which your TI-83/92 files are located.
2. Select the file that you want to print, then click on **OK** to open the file in an Edit or Data window.
3. Open the **File** menu and select **Print Document**.
The standard Windows Print dialogue box will open to let you select print options.
4. Click on **OK** to print the program.

**Printing Saved
TI-83/92 Files**

TI-GRAPH LINK lets you print all saved TI-83/92 files except geometry figures and macros.

To print TI-83/92 program or data files:

1. Open the **File** menu, select **Print**. Go to the directory in which your TI-83/92 files are located.
2. Select the file that you want to print, then click on **OK**.
The Windows Print dialogue box will open to let you select print options.
3. Click on **OK** to print the file.

TI-GGRAPH LINK for Windows (Continued)

Making a Backup of the TI-83/92 Memory

You can save an image of the contents of the TI-83/92 memory to a PC file. Later, you can send the backup image from the PC to the TI-83/92, replacing whatever is in the memory of the TI-83/92 at that time. You can save multiple TI-83/92 memory images on your PC.

To copy the entire contents of the TI-83/92 memory to a PC file:

1. Open the **Link** menu and select **Get Backup....**

The **Receive TI-83/92 Backup File** window opens.

2. Enter a file name for the backup file, select the directory location where you want to save it, then click on **OK**.

The **Receiving Backup** window is displayed showing the number of Kbytes being transferred in real-time mode. After the entire backup has been received, the backup completion message is displayed, **Backup from TI-83/92 received OK**.

3. Click on **OK** to write the backup file name that you selected in step 2 to the hard disk and return to the application.

**Loading
the TI-83/92
Memory from
a Backup File**

Warning! This operation overwrites the memory in the TI-83/92. All previous information in the TI-83/92 memory is replaced by the information from the backup file.

To send a memory backup file from the PC to a TI-83/92:

1. Open the **Link** menu and select **Send Backup....**
2. Select the directory in which your TI-83/92 backup files (backup.83/92b) are located.
3. Select the backup file that you want to send to the TI-83/92, then click on **OK** to display the **Ready to Send** window.
4. Click on **OK**.

The **Sending Backup** window is displayed showing the number of Kbytes being transferred in real-time mode. After the entire backup has been sent, the backup completion message is displayed, **Backup sent to TI-83/92 OK**.

Getting Started with TI-GRAPH LINK for Macintosh

System Requirements

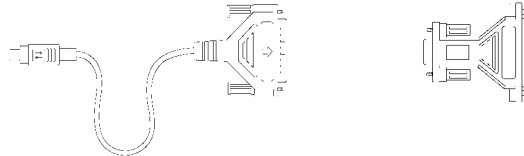
The Macintosh used to run TI-GRAPH LINK must meet the following hardware and software requirements.

- Macintosh Plus or better.
- Apple System file 6.0.5 (or newer version) with or without MultiFinder, or System 7.
- 512K bytes of available RAM.

Cable and Adapters

This package includes the following cable and adapters:

- One grey TI-GRAPH LINK cable that connects to a TI-83/92 and works for both Macintosh and IBM-compatible computers.
- One six-inch, 8-pin to 25-pin adapter cable (for the Macintosh).
- One 9-pin to 25-pin adapter (for the PC).



Warning: The six-inch, 8-pin to 25-pin adapter cable for the Macintosh is configured specifically for this product. DO NOT use other adapter cables that may look the same.

Connecting the TI-GRAPH LINK Cable

The TI-GRAPH LINK hardware connects to the Macintosh via the modem port of the computer and to the TI-83/92 via the port on the top edge of the TI-83/92.

1. Connect one end of the 8-pin to 25-pin adapter cable to the Macintosh modem port on the rear of the unit.
2. Connect the grey TI-GRAPH LINK cable to the 25-pin end of the 8-pin to 25-pin adapter cable.
3. Insert the other end of the TI-GRAPH LINK cable into the port at the top of the TI-83/92.

Important: Push in all connectors firmly.

**Installing the
TI-GRAPH LINK
Software**

(Optional) Make a copy of the diskette and use the copy to load the software.

- If the Macintosh has a hard disk, create and open a folder named LINK83/92. Drag the contents of the corresponding folder from the TI-GRAPH LINK diskette to the new folder on the hard disk.
- If the Macintosh does not have a hard disk, initialise a 3½-inch diskette named TI-83/92 and drag the contents from the TI-GRAPH LINK diskette to the new diskette.

**Installing the
TI-83/92 Font**

Close all active applications; only Finder should be active.

System Software 6.0.x:

1. Insert the TI-GRAPH LINK diskette in the Macintosh and double-click on the TI-83/92 font suitcase. (Font/DA Mover must be present.)
2. Select **TI-83/92 8** and **TI-83/92 12** in the Font/DA Mover dialogue box, then click on **OPEN**.
3. In the new dialogue box, select the drive containing the System Folder, open the System Folder, then select the System File.
4. Select **Copy** to copy the fonts to the System File.
5. Quit Font DA/Mover.
6. If you are using MultiFinder, restart the Macintosh to ensure that the fonts are available to all applications.

System Software 7:

1. Quit all applications that may be running.
2. Open the disk containing the System Folder.
3. Drag the TI-83/92 font suitcase to the System Folder icon.

TI-GGRAPH LINK for Macintosh (Continued)

Starting TI-GGRAPH LINK and Testing the Connection

1. Open the LINK83/92 folder and double-click on the application icon to start the TI-GGRAPH LINK application.
2. On the Macintosh, open the **Link** menu and select **Get Screen**.

The contents of the TI-83/92 display appear in the window indicating that the communications link between the TI-83/92 and the Macintosh is OK.

Note: If you obtain an error message when you click on **Get Screen**, there is a communications problem between the TI-83/92 and the Macintosh.

- Make sure the Macintosh serial cable is connected to the modem port on the Macintosh.
- Make sure all cable connectors are firmly inserted.

3. Click on **OK** to close the window.

Exiting the Program

You can close the LINK83/92 application in either of the following ways:

- Open the **File** menu and select **Quit**.
- Press **⌘-Q** on the Macintosh keyboard.

**Receiving Items
from the
TI-83/92**

To receive items from a TI-83/92 on your Macintosh:

1. Open the **Link** menu and select **Receive....**

The **Receive from TI-83/92** window will display the current Macintosh folder in the left window and the VAR-LINK contents of the TI-83/92 in the right window.

2. Select from the right window the TI-83/92 item that you want to receive on the Macintosh and click on **Add**.

Repeat this step if you want to receive multiple items, or click on **Add All** to receive all listed TI-83/92 items.

3. Select a folder on the Macintosh in which you want to store the received TI-83/92 items.

4. If you want to receive the files to a group, click on **Receive to Group File** (☐ means individual files, ☒ means one group file).

5. Click on **RECEIVE** when you are ready to receive the files from the TI-83/92.

- If **Receive to Group File** in step 4 is ☒, enter a new file name to replace the default name **Group.83/92g**. Retain the default file extension **.83/92g** to remind you that this is a TI-83/92 group file.
- If an incoming TI-83/92 item has the same name as an existing Macintosh file, you are prompted to overwrite, rename, skip to the next item, or cancel without receiving any more items.

6. Select an option. Repeat as necessary until all items have been received.

7. Click on **Close** to return to the desktop display.

TI-GGRAPH LINK for Macintosh (Continued)

Sending Files to the TI-83/92

To send files from your Macintosh to a TI-83/92:

1. Open the **Link** menu and select **Send....**
2. Go to the Macintosh folder in which your TI-83/92 files are located.
3. Select the file that you want to send to the TI-83/92 and click on **Add**. Repeat until all the files that you want to send are listed.
4. Go to the TI-83/92 folder in which you want to receive the files.

— or —

Click on **Send to Original Folder(s)** (☐ means one selected folder, ☒ means original folders).

5. Click on **SEND** when you are ready to send the files to the TI-83/92.
 - If a file from the Macintosh has the same name as an existing TI-83/92 item, you will be prompted to overwrite, rename, skip to the next item, or cancel without sending any more items.
 - If a file is locked on the TI-83/92, you will be prompted to skip to the next item, rename the file, or quit without sending any more items.
6. Select an option. Repeat as necessary until all items have been sent to the TI-83/92.
7. Click on **Close** to return to the desktop display.

About Lab Reports

Lab reports apply only to the TI-92. They are not available on the TI-83. A Lab Report on the TI-92 is a text file that can include print objects such as saved graphs or functions.

Obtaining a Lab Report from a TI-92

To obtain a lab report from the TI-92:

1. Open the **Link** menu and select **Get Lab Report**.
The **Get Lab Report** window will display a list of available lab reports below the TI-92 icon.
2. Select a lab report file name and click on **Add**.
3. Select the folder on the Macintosh in which to save the file and click on **RECEIVE**.
4. Enter a file name in place of the default name **Report.92r** and click on **OK**.
5. *(Optional)* To obtain another lab report, click on **Remove** to clear the list, then repeat steps 2, 3 and 4.
6. Click on **Close** to return to the desktop display.

Note: For information about creating lab reports, see Chapter 16: Text Editor, "Creating a Lab Report," in the *TI-92 Guidebook*.

Printing a TI-92 Lab Report

To print a lab report that was received from the TI-92:

1. Open the **File** menu, select **Print**, then select **Lab Reports....**
2. Select the lab report that you want to print and click on **Open**.
3. Click on **Print** to send the selected lab report to the printer.

TI-GRAPH LINK for Macintosh (Continued)

Printing Opened TI-83/92 Files

To print a TI-83/92 program that is displayed in an Edit window:

1. Open the **File** menu and select **Open**.
2. Go to the folder in which your TI-83/92 program files are located.
3. Select the program file that you want to print, then click on **Open** to open the file in an Edit window.
4. Open the **File** menu and select **Print Document**.
5. Click on **Print** in the Macintosh print dialogue box to send the program to the printer.

Printing Saved TI-83/92 Files

TI-GRAPH LINK lets you print all saved TI-83/92 files except geometry figures and macros.

To print a TI-83/92 file saved on the Macintosh:

1. Open the **File** menu, select **Print**, then select the type of file that you want to print.

Selecting **All TI-83/92 Objects** will display all available files except Lab Reports. To print a Lab Report, see "Printing Lab Reports" on the previous page.

2. Select the file that you want to print and click on **Add**. Repeat as necessary until all files that you want to print are listed.
3. Click on **Print** to open the Macintosh printer dialogue box.
4. Click on **Print** to send the selected files to the printer.

Making a Backup of the TI-83/92 Memory

You can save an image of the contents of the TI-83/92 memory to a Macintosh file. Later, you can send the backup image from the Macintosh to the TI-83/92, replacing whatever is in the memory of the TI-83/92 at that time. You can save multiple TI-83/92 memory images on your Macintosh.

To copy the entire contents of the TI-83/92 memory to a PC file:

1. Open the **Link** menu and select **Get Backup....**
2. Enter a file name for the backup file, select the folder where you want to save it, then click on **Save**.

A window is displayed to indicate that the Macintosh is receiving a backup from the TI-83/92. When the backup transfer is complete, you are returned to the desktop display.

Loading the TI-83/92 Memory from a Backup File

Warning! This operation overwrites the memory in the TI-83/92. All previous information in the TI-83/92 memory is replaced by the information from the backup file.

To send a memory backup file from the Macintosh to a TI-83/92:

1. Open the **Link** menu and select **Send Backup....**
2. Select the folder in which your TI-83/92 backup files (backup.83/92b) are located.
3. Select the backup file that you want to send to the TI-83/92 and click on **Open**.

A window is displayed to indicate that the Macintosh is sending a backup to the TI-83/92. When the backup transfer is complete, you are returned to the desktop display.