

# Calculator Repair Instructions

## TI-83 and TI-83 PLUS

Before you begin, please record calculator information:

- ✓ School Name
- ✓ Last four digits of serial number (Manufacturer date (ex. 0899))
- ✓ After repair, record work performed on calculator
- ✓ If unfixable, indicate reason (also tape reason to calculator)

### If the Calculator Will Not Turn On:

- 1) Remove the back battery door and replace the existing batteries with four new AAA batteries
- 2) Replace the backup battery located above the main batteries with a CR1616 3V or CR1620 3V Lithium battery
- 3) Reattach the battery door (make sure it is properly reattached)
- 4) Press the "ON" button.
- 5) You should see a blinking rectangle on the top left corner...

If you *do not* see the rectangle:

- 1) Adjust the contrast: Press the "2<sup>nd</sup>" button and then press and hold the up arrow to make it darker or the down arrow to make it lighter
  - 2) If adjusting the contrast doesn't work, then see below: [Troubleshooting: Calculator Screen Is Black](#)
- 6) If you do see the rectangle, complete a simple operation to check that it is working properly (i.e. 2 + 2 and press ENTER). If the "ENTER" button or any of number buttons don't work when you press them, it is NOT fixable.
  - 7) Once it's on and working, check the operation system version:
    - Press the "2<sup>nd</sup>" button
    - Then press the "+/MEM" button
    - Then press the "ENTER" button
    - The number displayed on the screen on the second line under "TI-83 Plus" is the version number
    - If the calculator is not version "1.19" then it should be upgraded to the latest version.
    - There are two ways to upgrade:
      - 1) Connecting the calculator to the computer and upgrading it
      - 2) Connecting the calculator to another calculator that has been upgraded or came with the latest operating system already on it. See below for instructions on both upgrading procedures

### Using a Computer to Upgrade your TI-83 PLUS:

- 1) Install the TI-83 PLUS software CD onto your computer
- 2) The new operating system and software needed to connect the calculator is free and can be downloaded from: <http://education.ti.com/educationportal/downloadcenter/SoftwareList.do?website=US&tabId=1&panelId=2#1> It is the first link on the page called: "TI-83 Plus family Operating System v 1.19"
- 3) Connect the calculator to the computer using the 3.5mm USB Data Cable
- 4) Open the TI-83 connection program
- 5) Go to Device Explorer and drag the "TI-83 Plus family Operating System v 1.19" into that folder
- 6) Wait for the software to be 100% transferred
- 7) It should start transmitting and show you the percentage of completion
- 8) If you get an error message on the calculator then the connection port is bad and the calculator is unfixable

### Using Another Calculator to Upgrade your TI-83 PLUS:

- 1) Check to make sure that one calculator has the 1.19 version of the operating system already on it
- 2) Connect the two calculators with the double sided 3.5mm cord
- 3) On the calculator that is being upgraded:
  - Press "2<sup>nd</sup>"
  - Then "X,T,O,n/Link"
  - Then press the right arrow key to highlight the "RECEIVE" button
  - Then press "ENTER"

- 4) On the calculator that has the latest version:
  - Press "2<sup>nd</sup>"
  - Then "X,T,O,n/LINK"
  - Then scroll down to option "G" which is "SendOS" and hit "ENTER"
- 5) The receiving calculator will ask for permission to receive and option one "Continue" is automatically highlighted.
- 6) Press "ENTER"
- 7) Transmission should begin and show the percentage of completion
- 8) If you get an error message then the connection port is bad and that calculator is unfixable

## **Troubleshooting: Calculators Screen Is Black**

- If the screen is completely black with pixels (and not ink from a broken screen):
  - First, make sure the contrast isn't turned all the way up by pressing the "2<sup>nd</sup>" button and then pressing and holding the up arrow key to make it darker or the down arrow key to make it lighter

### If the screen is still black:

- Clear the memory by removing one of the AAA batteries.
  - Press and hold the "CLEAR" key
  - While holding "CLEAR", reinsert the AAA battery and then turn the calculator on
  - The calculator should display the message "*RAM Cleared*"
  - Release the "CLEAR" key and then press it one more time to remove the message
  - You may need to adjust the contrast once again after completing this process
- Remove one of the AAA batteries
  - Press and hold the "DEL" key
  - While holding "DEL", reinsert the AAA battery and then turn the calculator on
  - The calculator should display "*Waiting...Please install calculator software now*"
  - See "[Instructions for using another calculator to upgrade](#)" above and follow those directions or see the directions above to install the operating system. You may need to adjust the contrast again after doing this.
  - Remove all of the batteries including the round lithium battery for five minutes. After five minutes, reinsert all of the batteries and turn the calculator on. You may need to adjust the contrast again after doing this.
  - Once the calculator is done receiving the new operating system it will turn off. Turn it back on and readjust the contrast again if needed by pressing the "2<sup>nd</sup>" button and then press and hold the up arrow key to darken or the down arrow key to lighten
  - When the new operating system is added the memory is cleared but sometimes there are programs that remain.

### Steps to see what programs may remain:

- Press "2<sup>nd</sup>"
  - Then press the "+/MEM" button
  - Go to option 2: "Mem Mgmt/Del..."
  - Then press "Enter"
  - Go down to option 7: "Prgm..."
  - If there are programs you need to delete, press the "Delete" key then select "YES"
-