fxNEWS
Support for all Casio fx-9860G models

# How to create an eActivity on the Casio fx9860G

## *What you'll need*

- A Casio fx9860G
- A computer running Windows 2000 or later
- The USB cable that came with your fx9860G
- The FA-124 software that came on CD with your fx9860G
- A copy of the fx9860G emulator

You don't actually need the last 4, but it's way quicker with them and you'll always have a backup on computer. We'll assume you want to make your eActivity using all five.

If you don't have the emulator, go to

**https://secure.casio.co.jp/edu_e/product/fx9860g/form.html**

where after you have filled in a form you get access to OS updates, add-ins, the emulator and other software.

If that address doesn't work (this was written in May 2006 and the web is always changing…) start at the world Casio site and dig down for fx9860G stuff. The world site is at

**http://world.casio.com/**

## *What to do*

1. Create the eActivity using the emulator
2. Save the eActivity onto your computer
3. Import the eActivity into the FA-124 software
4. Transmit the eActivity from the FA-124 software to your fx9860G using the USB cable

First time through things may seem a bit complicated, but you'll soon realise that it's actually really easy.

We'll explain how through the following example. As part of your study of quadratic functions, you'd like your students to understand how the three main algebraic forms of a quadratic function – standard, factored and completed square – each link with particular feature of it's graph. We'll call the eActivity QUADLINK and the quadratic we'll use is $y = x^2 - 2x - 3$.

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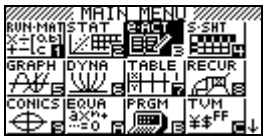
## *How to do it*

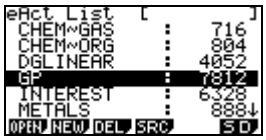
### 1. Create the eActivity using the emulator

Once you've downloaded the free emulator, simply double-click it to get it running. You may or may not get a warning screen before it starts.

This is the first thing you'll see. Press MENU and use the cursor key to move to the eAct icon.




Chances are you'll see the left screen, unless you've already created an eActivity before in which case a list of eActivities will show.




Here we'd better mention that when using the emulator you can work with either your computer keyboard or use your mouse to tap on the emulator keys – as if it were your actual fx9860!

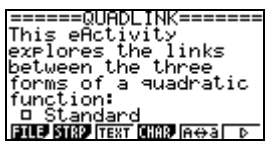
For example, we now need to either press F2 on your keyboard or tap the F2 key on the emulator to name our new eActivity. In the examples below, we'll use whatever combination comes naturally or seems easiest!

A few special keys:

| **Emulator** | **Computer Keyboard** |
|---|---|
| EXE | Enter |
| EXIT | Escape |
| AC/ON | Tab |
| SHIFT | Insert |
| OPTN | Home |
| VARS | PageUp |
| MENU | PageDown |
| ALPHA | End |
| DEL | Delete |

Tap F2, enter a name for your eActivity and tap ENTER. Note you can only use CAPITAL letters from the computer keyboard and limited other keys for the eActivity name.

Now you can type some introductory text immediately…




Or insert a Notes strip…

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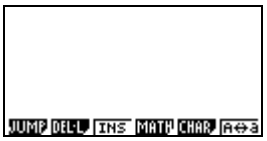
When typing, you'll soon realise that there is no word wrap… your words just keep on going off the screen to the right. Keep an eye on what you're doing and put in manual line breaks using ENTER at least every 21 characters. You can use the arrow keys on your keyboard or the cursor keys on the emulator to move around through the text you have typed.

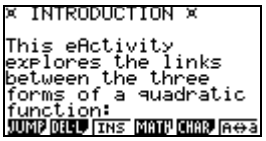
Insert a Notes strip…

Tap F2 (STRP), tap the down arrow until you reach Notes and then tap ENTER.

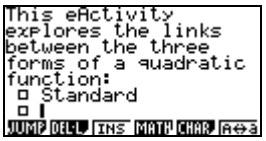
A Notes strip is inserted and is highlighted. Tap the left arrow and give the strip a meaningful name and then tap ENTER.

Tap Enter again and now we're in a Notes strip within our eActivity! Notes strips are a good way to keep your eActivity easy to navigate.



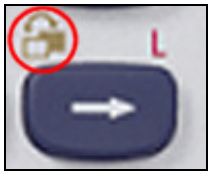

Type text using your keyboard. Insert special characters using F5, the arrow keys and ENTER.



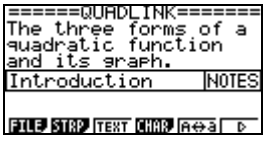

Once the introduction has been typed we need to get back to the eActivity to continue. We'll do this using the emulator keys.

Tap SHIFT then the ARROW key.

The beige icon above the ARROW key reminds you that it switches from the current strip back to the eActivity.



Save your work! Just as with any electronic media, frequent saving is a good idea! Tap F1 and F1 again. Easy!

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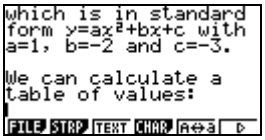
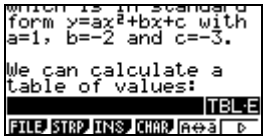
Next we'll add a table of values for the function in standard form.

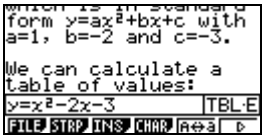


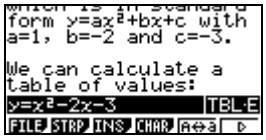

Insert a Table…

Tap F2 (STRP), tap the down arrow until you reach Table Editor and then tap ENTER.

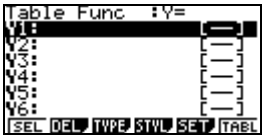



A Table Editor strip is inserted and is highlighted. Tap the left arrow and give the strip a meaningful name and then tap ENTER.

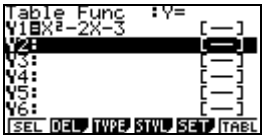


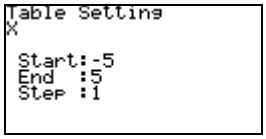




Getting the hang of inserting strips? Good! Tap Enter again and now we're in a Table strip within our eActivity!

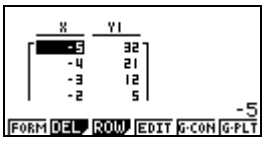



Enter the function as usual…
Set the Table range using F5 (SET) and then EXIT.

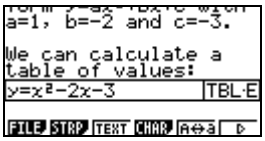



Finally, tap F6 (TABL) to produce a table of values.

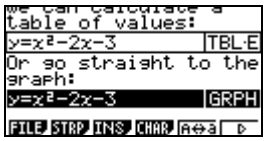



OK! Out of the Table strip and back to the eActivity.

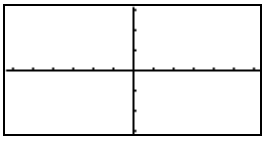



Next let's see the graph of the function and find the y-intercept. Insert a Graph strip, name it…

(note that Graph Editor starts graph in function entry mode, whereas Graph goes straight to the drawn function).




Nothing is drawn, since no function has been entered! Tap EXIT and enter the function.



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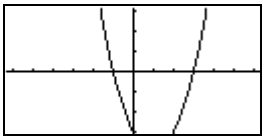
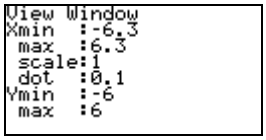
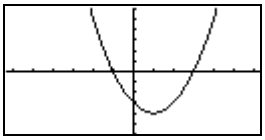
Next tap F6 (DRAW).



We could adjust the View-Window for a better graph…




Great!

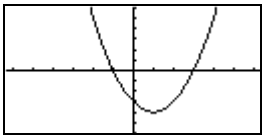


Now, remember that all the settings that we make within each strip are unique to that strip. When we leave this strip and return to the eActivity, all settings are preserved – even when we leave the eActivity, turn the calculator off and come back to it next week!

Put it to the test!

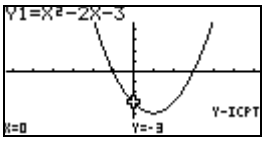
Return back to the eActivity, save (F1, F1) and exit the eActivity. From the Main Menu choose graph, draw another function, mess up the View-Window and then go back into the eActivity…

What do you see when you go back into our graph?



Just how we left it!

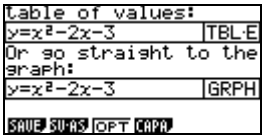
We intended to find the y-intercept and link it with the 'c' coefficient of –3 in $y = x^2 - 2x - 3$. Use the G-Solv menu (F5) and there it is.

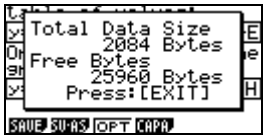



## Other Editing Features…

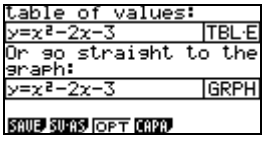
By now you should be getting the idea about how to insert strips. We'll leave building the rest of the eActivity up to you and look at a few other editing features you may need to use.

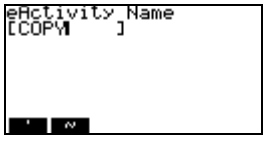
**How big can an eActivity be?**
Under the File menu, choose F4 (CAPA) to see how much space you've used and how much is free. About 25Kb is usually available for an individual eActivity.




**Save As.**
Under the File menu, choose F2 (SV.AS) to save the eActivity under a different name – useful to start a new eActivity using a copy of the old one as a template.

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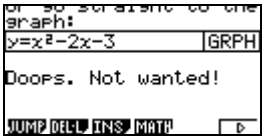
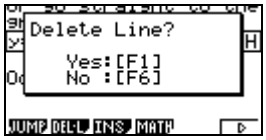
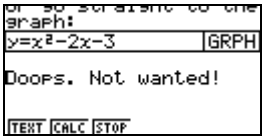
**Inserting/Deleting a whole line.**
Move to the line you want to delete, tap F6 until you see the DEL.L option and confirm.



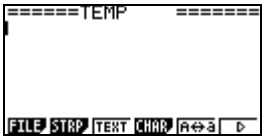



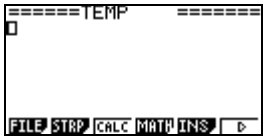

Move to the line you want to insert above and choose the INS option. You have a choice of inserting a TEXT, CALCulation or STOP line.



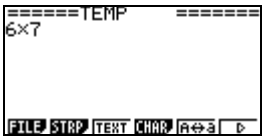

**TEXT? CALC? STOP?** What's the difference? When you start an eActivity notice that above the F3 key is the 'TEXT' option.

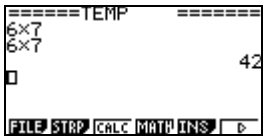
Tapping F3 toggles between TEXT and CALC. Also notice how the cursor changes shape…



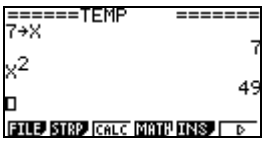



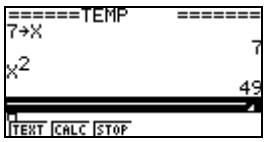

In TEXT mode, type $6 \times 7$ and tap EXE. No result is calculated.
Now change to CALC mode and repeat – a result is calculated. You can now use the eActivity space to perform calculations just as if you were in RUN mode.



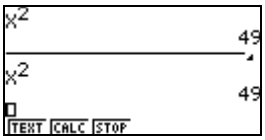



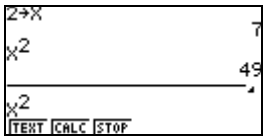

In CALC mode assign 7 to the variable X as shown. Then type $X^2$ and EXE. The result is 49.
Next insert a STOP line via the INS option. Tap down a line and type $X^2$ again. 49 again!

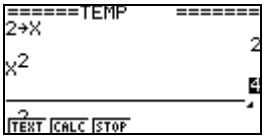


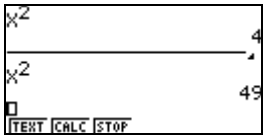




Now tap your way back up to the top line and modify it so that 2 is assigned to X and tap EXE. The whole screen is re-calculated with the new value of X until the STOP line is reached. Below the STOP line nothing changes. STOP lines break the CALCulation spaces into discrete areas.



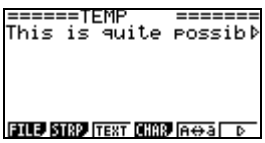



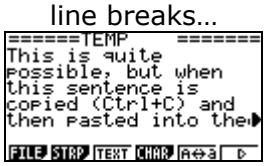




**Cut and Paste**
A quick word on cut and paste from other documents such as the internet or a word document…

This is quite possible, but when this sentence is copied (Ctrl+C) and then pasted into the emulator (Ctrl+V) you get the screen at left!




You still need to go through and manually insert line breaks…

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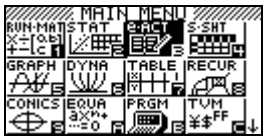
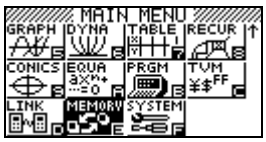
## 2. Save the eActivity onto your computer

OK. It's time to start getting our eActivity from computer to fx9860. Check you've saved the eActivity one last time and tap MENU to access the Main Menu.




Head south to the Memory Icon and tap ENTER.



Next tap F2 to enter the storage memory. You should see your new eActivity (with extension .g1e) in the list of files in storage memory.

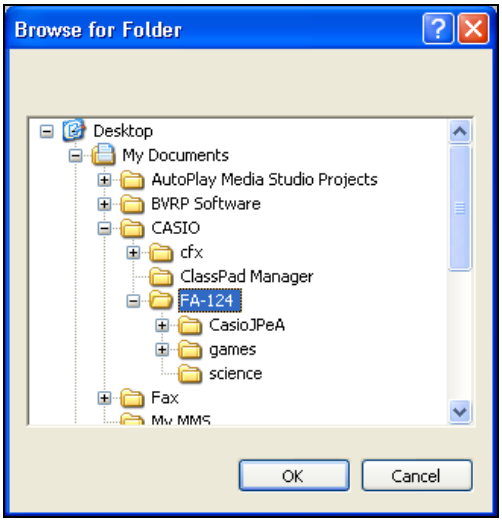
Note that eActivities are always saved to Storage Memory, whereas programs and spreadsheets need to be in Main Memory when you want to use them. When Main Memory becomes full (ie 64k or more) you'll need to save programs and spreadsheets to Storage Memory to free up room.

That's why eActivities are great – they always get saved direct to Storage memory where there are heaps of Kb for them!

eActivities are saved with file extension *.g1e. Sets of programs and or spreadsheets are saved with extension *.g1m by the emulator and fx9860.

Nearly there! Highlight the eActivity you want to save to computer, tap F1 to select it and then tap F2 to get the 'Copy to' screen.

Tap the 2 key and then use the Browse for Folder window to navigate to your FA-124 folder and hit OK. (You can save it anywhere else too, but this is the easiest folder to find when using the FA-124 software in the next step).

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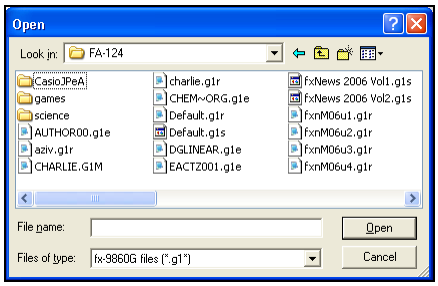
After OK you get the message as shown.

That's it with the emulator, so now's the time to close it. Note that your eActivity will still be there when you re-open the emulator next time.

**Extra!**

You can also import other people's eActivities into your emulator to edit or modify.
From the Memory Manager screen tap F3 to get the Open window.

Navigate to wherever the eActivity is and double-click it (remember it will have a *.g1e file extension). Easy! It will appear in the list of files when you enter eActivity from the Main Menu.

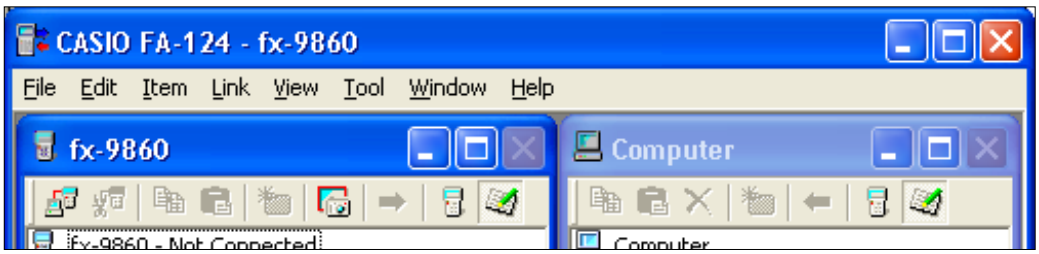



## 3. Import the eActivity into the FA-124 software

**Open the FA-124 software…**

FA-124 has two explorer windows. One for the fx-9860 on the left and one for the Computer on the right.

*The two FA-124 windows. On the left fx-9860 and on the right Computer.*




Both windows have two views – main memory and storage memory– and they will always show the same view. To change between the views click on one of the right most two toolbar icons in either window.

Main Memory
Storage Memory

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eActivities are always located in Storage Memory, whereas programs and spreadsheets can be found in both Main and Storage – just like in the emulator and in the fx9860.

**Now we're ready to import the eActivity into the FA-124 software…**

1. Select storage memory view (Click on the icon).
2. Select the computer window.
3. Right click on the Default icon under the Computer icon and select Import fx-9860 File.
4. This will bring up a file browser window. eActivities always have the file extension *.g1e. Change the 'Files of type' drop down menu to either All Files(*.*) or simply G1E File(*.g1e).
5. Find the *.g1e file that you need, select it and click on open.
6. The eActivity has been added underneath the Default icon.

Note. Later on you may wish to create your own 'Images' besides the Default one to organise your eActivities, programs, etc. Simply right click the Computer icon, choose Add New Image, give it a name and that's it. You can also create folders within an image for even more organisation. All image files have file extension *.g1s and are automatically saved in the default CASIO/FA-124/ folder within My Documents.

## 4. Transmit the eActivity from the FA-124 software to your fx9860G using the USB cable

We're nearly there now!

1. Plug the USB cable into your computer and then into your fx-9860.
2. The fx-9860 should automatically start waiting for communication from the FA-124 software (screen says Receiving…). If it does not:
    a. Go to the Main Menu, tap down and open Link.
    b. Make sure the Cable Type is USB and Wakeup is On.
    c. If they are not, change them.
    d. Tap RECV (F2) to choose Receive.
    e. The fx-9860 is now waiting for you to transfer files.
3. Go back to the FA-124. The fx-9860 is ready to receive files, but the FA-124 is not ready to send them. Look in the fx-9860 window (usually on the left) and click on - the first icon on the left in the fx-9860 window's toolbar. This will connect the FA-124 to the fx-9860, and you will see information from the fx-9860 being sent to the computer.
4. Now simply drag the eActivity from the Computer window to the lower fx-9860G icon in the fx-9860 window.
5. Click on the disconnect icon on the fx-9860 window's toolbar (2nd button in the toolbar from the left) to disconnect the FA-124.
6. On the fx-9860, the connection will have automatically ended. Tap EXIT, MENU and then start the eACT application. You will see the name of the eActivity amongst the list. Highlight and tap EXE to start.

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