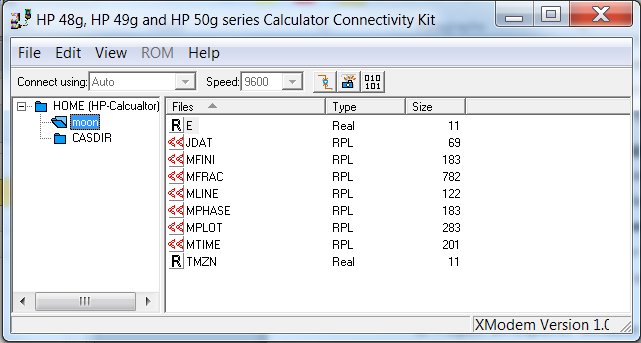
# Description

Moon is a small program to calculate and display the moon phases. It uses the drawing routines provided by Craig Finseth's phase of the moon program (with the modifications to FLIP as suggested by Preston Brown and Juri Munkki), but has an adapted version of the very complicated phase calculation in John Walker's moontool application on the SUN. My work just consisted on creating these detailed instructions and on adapting the original program from Dan Gerson to the HP50.

# How to install the program

This is the procedure pointed out by HP’s technical support team:

1. Install the Connectivity Kit (Con4x) and the calculator driver on your computer. The drivers are installed automatically on step 3 when you connect the calculator to the PC.
2. Make sure that flag 33 is set on your calculator to **Transfer Via Wire**.
3. Connect your calculator to the PC using the USB cable.
4. Start the Con4x program.
5. In the calculator, press **Right Shift** and then **Right Arrow** to enter the Kermit mode server. You would see the Xmodem screen and the message **Waiting for Command**.
6. On the Con4x window select **Auto** on the **Connect using:** list.
7. Click **Quick connect to the calculator** , just beside where you selected the connection mode (at one side of the button that looks like a camera). The computer should find the calculator and show you the **HOME** objects. If the calculator is not recognized, try turning it off and then on.
8. Be sure the **Binary transfer mode** is on ().
9. Open an **Explorer** window and then drag moon.hp to the HOME directory on the Con4x directory. The Moon folder is created:



1. Click **Disconnect from the Calculator** .

Alternatively, you can transfer files with an SD card:

1. Put the SD card in a free PC slot (or using the appropriate reader).
2. Drop the moon.hp file into the folder.
3. Put the card back in the calculator.
4. Navigate to the SD card using FILES.
5. Recall the moon.hp object to the stack.
6. Once you see the program on the stack, write ‘Moon’ to store the program in a variable:       

Either way you are now ready to use your program.

# How to use the program

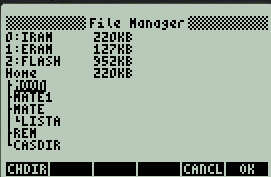
Press  to have access to the variable menu. Search the Moon variable from the list and press its corresponding soft key. The list of submenus now appears on the screen.

Use the  or arrow keys to find the sub-program you want to use and press the corresponding soft key:

* MPHASE: Calculates the moon’s Illumination and age.
* MTIME: Calculates how old the moon (number of days, hours, and minutes from the last new moon along with the current moon’s illuminated percentage)
* MFRAC: Calculates the illuminated percentage of the moon plus the moon’s age since the last new moon.
* JDAT: Calculates the current civil Julian date and fraction of the day
* MPLOT: Plots the moon's age.
* MLINE: Used by MPLOT. Of no direct utility.
* MFINI: Adds "stars". Used by MPLOT. No direct utility.
* E. Constant used by MFRAC. No direct utility.
* TMZN. Adjust for your time zone (Paris is 1, Greenwich is zero, and so on).

# How to uninstall the program

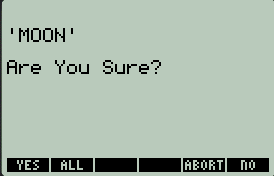
Press   to show the directory structure. Navigate to Moon using the  arrow:



Press to select the Moon directory. Navigate to the  soft button using the  or arrow keys. Press the  soft key.



An “Are you sure?” message appears. Confirm pressing the  soft key.



The Moon directory with all its sub-programs disappears from your calculator.

Then press  to go up on the directory structure and finally the  soft key to exit from the directory menu.