

Technical Note – 16-9

Palm M5XX and M125 with Magic Timers

The Palm 5XX [500, 505 and 515] series and the Palm M125 have the ability to read and write information to a SD card. In addition they can run applications from the SD card as well as from memory. They are no longer made. Magic Timers have a limited number that are provided in a special bundle as is to support the programming of Magic Timers. Super Magic will run on this device and it has a serial port to program Magic Timers. Information stored on the SD will not go away if the Palm Pilot loses power.

The M5XX models of the Palm Pilot have rechargeable batteries. Be sure to recharge them. The bundle includes a USB charging cable. Magic Timers have other chargers available from time to time.

The M125 is a device similar in functionality to a M5XX but has a smaller screen and uses AAA dry cells rather than the rechargeable batteries in the M5XX. The other instructions for use are similar to the M5XX series.

SD card that comes from Magic Timers there is a Directory PALM and a further sub-directory LAUNCHER. In this directory there are 2 files from Magic Timers – NMAGIC6.PRC and REL403.PRC. NMAGIC6 is the legacy version of Super Magic, it is version 4.47. REL403 is the current version of Super Magic and this version has an M on the screen icon, it has a version number of 4.80 or later. These files can be copied to memory i.e., to the Palm. The PALM/LAUNCHER directory structure is used so that programs on the card can be executed.

You should NEVER use a version of Super Magic that is older than 4.47.

The newer version of Super Magic is required for all 4 and 5 servo Magic Timers and Micro Magic. It has an improved connection protocol between the Palm and the timer that applies to older timers as well. This version of Super Magic requires Palm OS 3.5 or later. This is not a problem for either the M5XX or M125 Palm pilots. You should use this version.

The SD card can be removed from the Palm Pilot and be accessed by a PC or MAC with a SD Card reader. You can use this to move new versions of Super Magic that may have been e-mailed to you from the PC to the Palm as an alternate to the Hot Sync process.

Note that the Magic Database from the Palm can be saved on a PC or MAC it cannot be processed or viewed on by a PC or MAC. The Magic data base is called MagicDB and is always held on the Palm, even when the programs are run from the SD card.

Some parts of the Magic Timers Palm Bundle may not be new but they are all in working order.

There is a 30 day warranty from the date of shipment.

Programming Cable

There bundle includes a cable between the Palm and a Magic timer. The connector at the timer end can vary depending on the type of timer.

Cable with 2.5mm stereo connector.

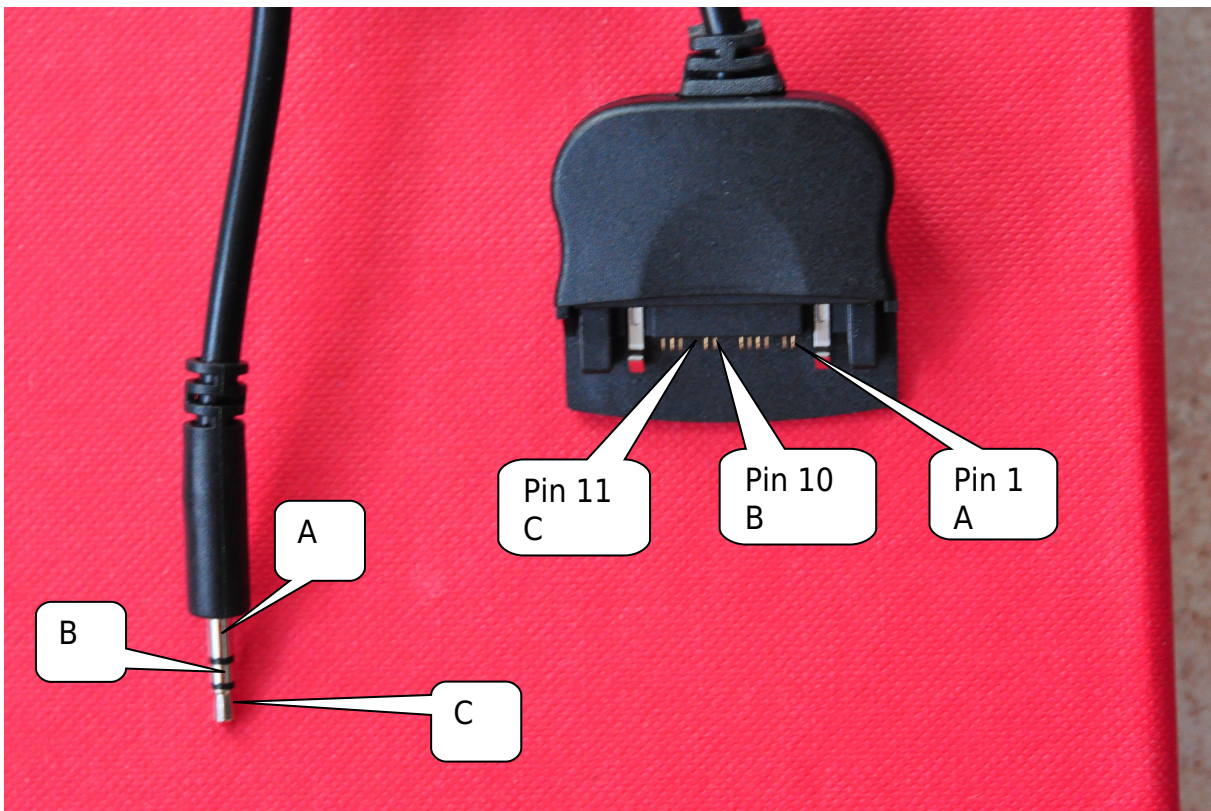
There are two different kinds of connectors at the Palm end. The connector on the left is a locking connector intended for these Palms. The connector on the right was made for some Zire and Tungsten models and has the same pins and spacing. It does not lock but the flat plate under pins can make the connection easier. Both will work.

There are 16 pins on the connector but only pins 1, 10 and 11 are used. When the pins are pointing vertically and the cable towards the ground, pin number one is at the left hand end . Note that not all the pins may be present. As long as pins 1, 10 and 11 are present it is OK.



Testing a Cable.

With the aid of the continuity function on a multi-meter you can check the cable.



Make sure that
A connects to A
B connects to B
C connects to C

Make sure all pins are of the same length.

Make sure there is no shorting between pins by putting one meter probe on one of the 3 pins and running the other probe across the remaining pins to make sure there is not a connection. Repeat for each of the 3 active pins.

If the cable fails any of the
above tests, repair or replace the cable.

The SD Card

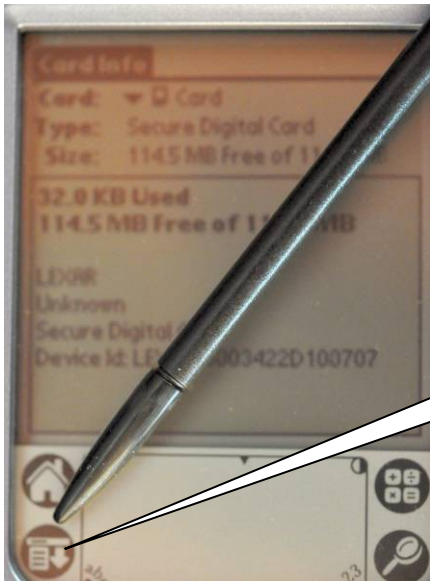
Not all SD Cards will work with the Palm m5XX and M125. Nowadays SD cards can be several gigabytes in size to accommodate multimedia applications. That was not the case when these Palm Pilots were originally made. They are in what's called FAT-16 format and should be less than 128MB.* Sometimes formatting programs on PCs may create a SD card that cannot be read or executed from on the Palm. If you bought a Palm Bundle from Magic Timers the SD will be one that works.

The directory structure on the SD card is very important. There must be one called PALM and under that one called LAUNCHER.

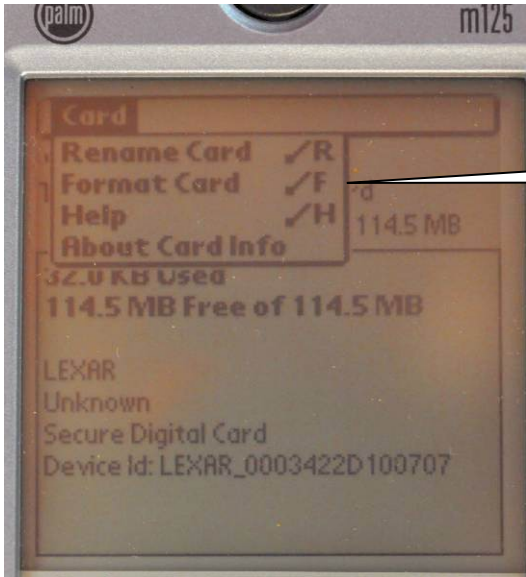
You can always reformat a card with the Palm itself so that it will be compatible. Remember doing this will erase all information on the SD Card. This is how it is done. You do not need to do this if you bought a Palm Bundle from Magic Timers. SD cards formatted on a Palm can be read by a PC.



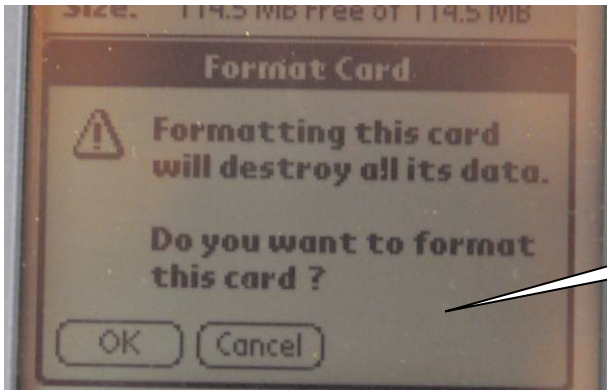
Select the Card Info program. If the card is not formatted or unrecognizable you will be asked if you want to format it right away - do so.



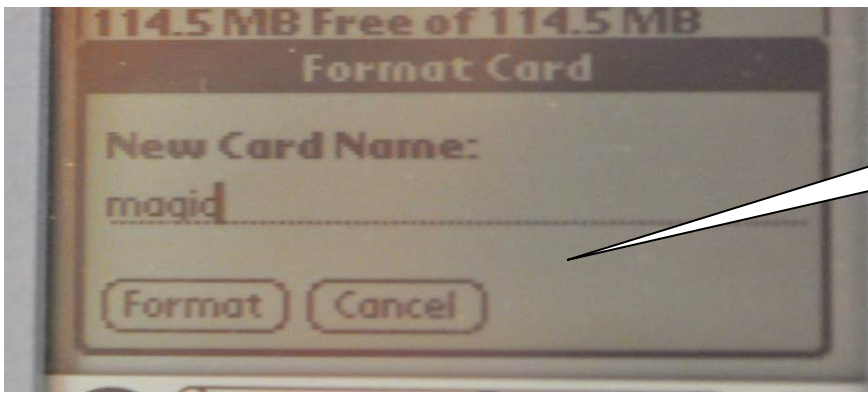
Tap on the menu button



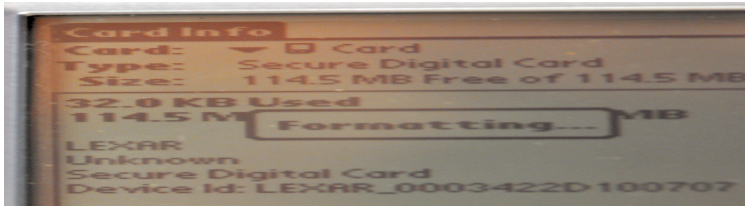
Select Reformat card



Confirm that you want to go ahead



You can name the card if you wish



The card will now be formatted

Real SD card size and File Manager Patch

Note that the actual maximum SD card size that the M5XX and M125 will handle is 1 GB, but there is SD handling bug in some versions of the software that has a number of errors including not being able to format cards bigger than 128 MB and not handling some SD cards formatted on some PCs. There is a SD card patch that will fix this and can be downloaded from the Palm/HP site, see the links list at the end of this document.

This patch is also included for your convenience on the SD shipped as part of the Magic Timers Palm Bundle. It is called SD Installer. You can run this, it will install a software patch that will improve the handling of SD cards. Note that this patch will be lost if you do a hard reset on the Palm. A hard reset is performed when you lose battery power, so if this happens you have to run the patch again. It only takes a few seconds.

Note that the SD cards in the Magic Timers Palm Bundle that this patch is not required. This information is here for those who want more flexibility in with their SD cards or who get an M5XX or M125 from another source.

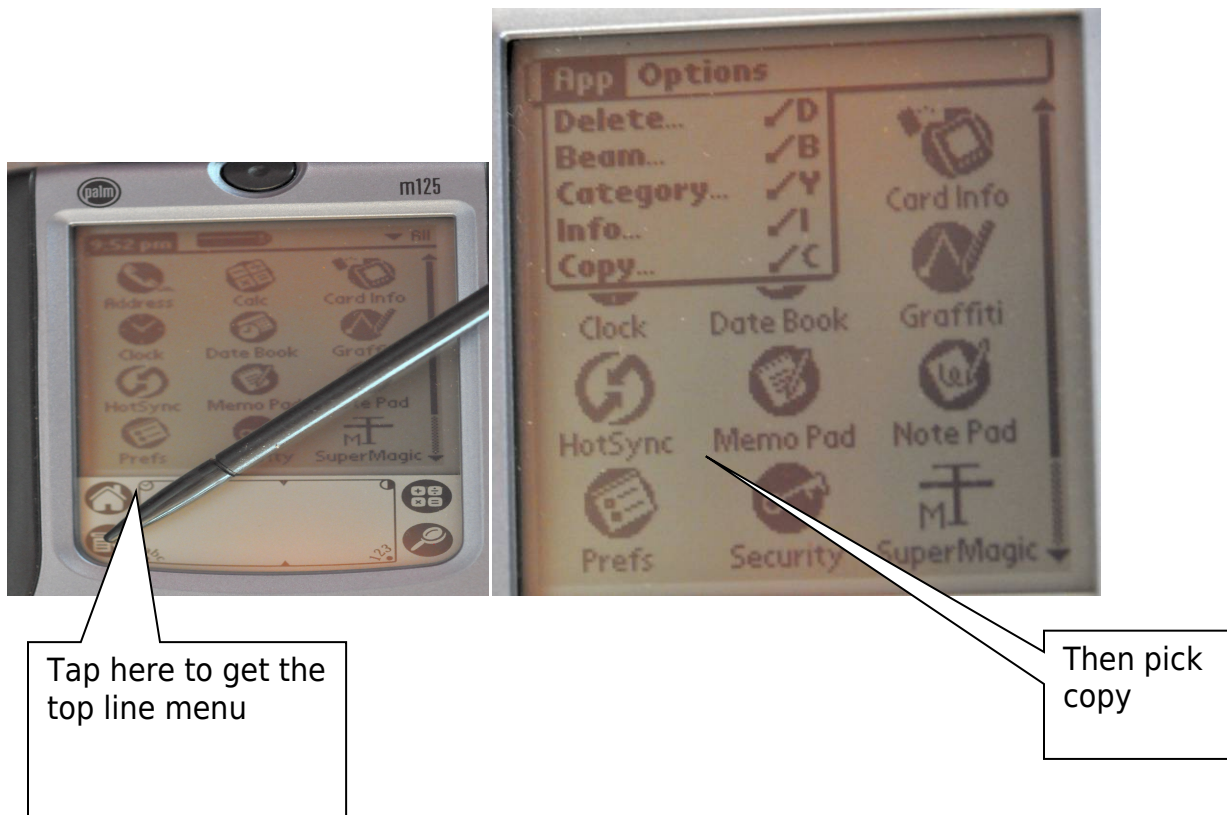
How to Run Programs from the SD card

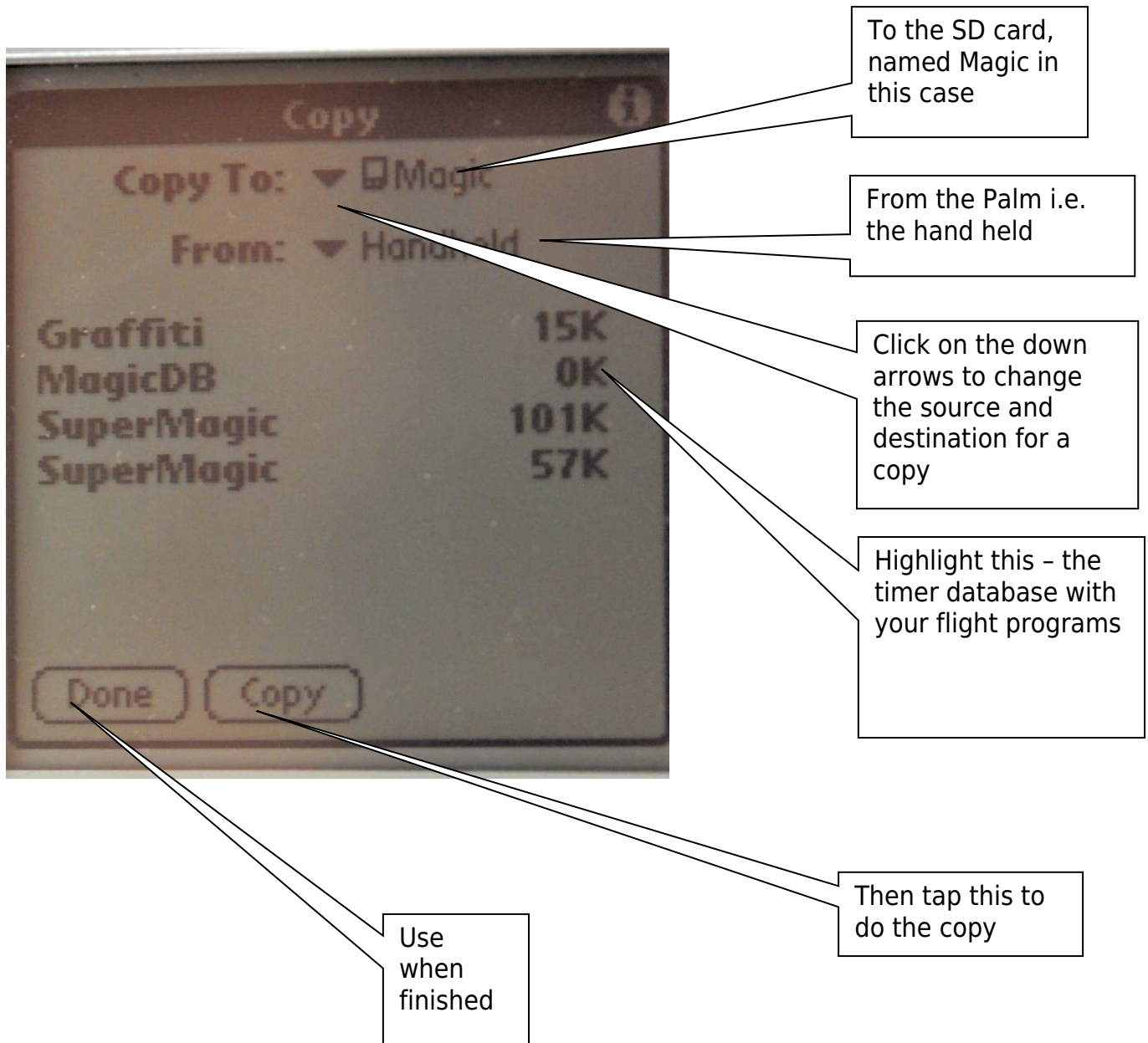
When you put the SD Card in the M5XX/M125 it will ask if you want to run one of the programs in the Launcher Directory by showing the contents of the launcher directory. The Super Magic can be run from there just as easily as memory, it is a little slower. There are some programs that cannot be run from there, notably the Altitude Analysis program. To run this program, it and all its software libraries have to be copied to the Palm.

When you push on the Home button it will cycle through the list of sources for programs and will arrive at the SD card

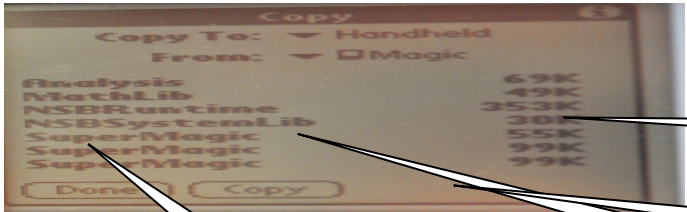
Reading and Writing the SD Card

From the home screen if you tap the bottom left button you will get a top line copy menu that will let you copy to and from the SD card. When you are putting new versions of SuperMagic on the SD card be sure to put them in the Palm/Launcher directory.





This is how you back up the MagicDB on to the SD card.



Copy to the Palm

From the SD card called Magic

By pushing the button

And this one when finished..

This shows the process of moving a new program from the SD card to the Palm

The program called Super Magic

Manipulation of other files on the Palm

The Copy mechanism that is native to the Palm does not permit the copying of non-program files. The Super Magic program will create on the Palm the MagicDB database with information about the flight programs that you have put in your models. This can be copied from the Palm on the SD card by a third party Palm utility program. There are at least two programs that work well. On the SD card there is a copy of FileZ. It is a freeware program. The terms for using it and the documentation are in the FileZ folder. The second program has some more features and can be bought from Resco for a nominal fee – it is called the Explorer. See below for their web site.

Using FileZ you select the display files function on internal storage.

Then you tap on the screen menu button – bottom left of the Palm built in buttons.

From the pull down menu you select copy

You will then see both the internal storage and SD card displayed

Navigate to find the destination directory you want and tap OK to do the copy.

Reverse the process to bring the Database back.

Super Magic uses the database that is internal to the Palm. Even if the programs are run from the SD card the database is always held on Palm.

Screen Contrast

For those used to a Palm III or TRG the screen contrast is adjusted by tapping on the half white half black circle in the top right of the Graffiti area.

Palm Desktop and User Documentation

The Palm Bundles include the handheld as is without Palm documentation. These are out of support devices but the documentation can be found on-line at

http://kb.Palm.com/wps/portal/kb/common/article/47831_en.html.

And

<http://www.Palm.com/us/support/handbooks/Palmpilothb.pdf>

http://kb.Palm.com/wps/portal/kb/common/article/47831_en.html#m125

http://kb.Palm.com/wps/portal/kb/common/article/47831_en.html#m500

The file manager patch is at

http://kb.hpwebos.com/wps/portal/kb2/common/article/48335_en.html#m125

We do not provide general help in using a Palm Pilot.

More information on FileZ – pal utility used for backup

www.freewarePalm.com/utilities/filez.shtml

Web address of Resco who provide some advanced Palm utilities at low cost

<http://www.resco.net/Palm>

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