Running Nintendo DS homebrew
by Simon van de Berg

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http://SupercardStore.com
http://G6flash.com
http://BamBooGaming.com

Introduction

Many people have asked me how to start DS homebrewing. Because of this, because I like homebrew, and feel homebrew is a great addition to the capabilities of the Nintendo DS, I made this guide.

For those who do not know what homebrew is:
http://en.wikipedia.org/wiki/Homebrew_(video_games)

I will try to explain different aspects of DS homebrew, and how to get DS homebrew to run on your system.

Aiming at people new to the scene with no previous experience with coding or homebrew, I will try not to get too technical. All hardware I have tried will be reviewed here, and stated how well they work with homebrew (meaning what types of homebrew run on the different cards). Pieces of hardware I have not tried will be noted, and any experiences I have heard will be added, but I can not guarantee anything.

If you have previous homebrewing experience, but none in DS homebrewing, this is also a good guide for you. When you are a veteran you can probably figure most things out by yourself and try to skim through my guide.

There is one thing I need to mention:

Pirating of software is something I do not approve of.

Pirating is often associated with homebrew. Pirating is a term used for running official games you do not own, or do own, but are not allowed to play in some way by law. Homebrew is creating and sharing programs made by yourself and/or others for free. This means that no business is attached to the software. Please keep in mind that this also means that there is no support for the software, unless someone will provide it for you.

Homebrewing is a really great development. Just look at what great applications the DS has been given by the homebrew community! The capabilities of the Nintendo DS are explored in many ways. Some great applications I frequently use are programs such as DSlinux, and DSorganize. But there are also great Homebrew games like ScummVM, Omalone, etcetera.

Content:

Part 1: So I've got a Nintendo DS, and I want to run HB, what do I do?

PassMe, NoPass, WifiMe and FlashMe

A normal Nintendo DS, freshly out of the box, will not boot homebrew. However, DarkFader was the first to think of a way to run homebrew on the Nintendo DS. This method involved using some neat hardware to trick the DS in running code off of a flashable GBA card[1]. Natrium42 developed a much smaller passthrough based on the technology of DarkFader's findings.

His device was ready for the general public, and he called it a PassMe (the -Me bit is important, as it is used for every method of passthrough from the DS-slot to the GBA-slot).
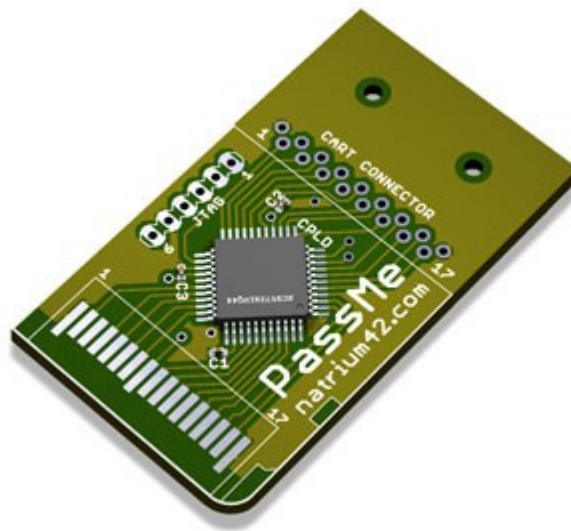
Someone else has thought of a way to use the Nintendo DS's wifi download play option to do the same thing as the PassMe did: It worked by downloading a program via the standard "Download-Play" option, which would send the DS running code from the GBA slot. Because this passthrough way was enabled via WiFi, it has been called WifiMe.

Another way to do the passthrough is achieved using FlashMe.
This is a Firmware[2] patch which enables the DS to do the passthrough without having to use a PassMe or WifiMe. The only disadvantage of it is that it will void your warranty.

Finally, we have NoPass, which is the size of a normal DS card. These do not require an original game to be inserted, nor do they need to use the SRAM (GBAMP V2 will work with NoPass). The NoPass device also stops your DS from switching in and out of sleep mode rapidly when you close it. So you wouldn't need to have a normal card in your DS to put it into sleep mode; you can just leave the NoPass in.

As you can see, all DS homebrew is booted via the GBAslot. There are flashable DS cards, and we could run homebrew off of them, but this is undeveloped at this time.

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1   Cards that fits in the GBA slot, which you can flash yourself
2   Firmware is a layer beneath the Operating System, which enables us to access the hardware

Part 2: Deeper into the passthroughs

More information on the different passthrough methods.

Now there are a few things you should know about the different methods of *Me's.
I will try not to get technical since that would only confuse people new to the scene.

PassMe and PassMe2

There are two versions of PassMe: the original PassMe from Natrium42, and PassMe2.
A PassMe(v1) only works if your DS has firmware version 1,2 or 3.

A workaround was made and the PassMe2 was born. There is one difficulty with the PassMe2
and that is that it requires SRAM (memory) on the GBA media that you boot your homebrew
code from.

> - PassMe/PassMe2 leaves your warranty intact.
> - PassMe and PassMe2 require an original DS game to work (PassMe2 needs to be flashed
> to the original game you use).
> - PassMe/PassMe2's are made by different companies under different names, SuperPass,
> SuperKey, NeoKey, etc., but if you can, try to buy them from a developer and thus
> supporting homebrew development

WifiMe

When WifiMe was developed, it only worked with very specific wireless cards (the RT2500
chipset) and only with Windows. These demands had to be met if you wanted to run WifiMe.

However, there are also ways to WifiMe via an rt2500usb/rt2570 (which are different names for
the same chip) USB wireless card. This requires you to "run" Linux. To see how to use this,
please read my howto on WifiMe-/WMBing (remember that the official Nintendo wifi USB
card is a WifiMe compatible USB device).

WifiMe does not influence your warranty.

WifiMe only works with Nintendo DS units that have firmware version 1, 2 or 3.

FlashMe

FlashMe eliminates the need for any of the previous methods and unlike PassMe and WifiMe
methods, you only need to flash your DS once. This passthrough is then permanent. You need
to use WifiMe and PassMe every time you want to boot homebrew if those are your methods of
preference.

It checks for homebrew on the GBA media inserted (in the GBA slot) or a DS-slot solution and
if present boots it automatically. If you want to install FlashMe on your DS, you will need
either a PassMe(v1 or v2) or WifiMe once, to boot the flasher, or use PPflash, although I would

say PPflash is not my choice to flash since it is quite hard to do.

Like I mentioned earlier, this method **voids your warranty**, and you may brick[3] your DS.
It might be possible to fix this by using PPflash, but I have not tested it.

FlashMe works with every version of firmware: it flashes your DS to a modified version of the original firmware version 3.

I have used FlashMe on my DS, and I experienced no problems. If you try to do this too, you only need to _carefully_ follow the instructions of the FlashMe homepage.

There is a FlashMe guide on my website, by tc1415, edited by me.

NoPass
They are sold with very different names:

SuperKey,　　MK4-mini,　　Max Media Launcher,　　PassCard 3

This can be confusing, but they always advertise as the same product; A, DS card sized, passthrough device without the need for an original card or flashing your DS.

3　Bricking; a term indicating that your DS no longer functions thus becoming nothing more then a brick

Part 3: So what device is good for me?

Pro's and con's

I guess that you are now wondering, among other things, what passthrough device you want/need. One of the most important things is the version firmware you have. I didn't have to buy anything to run homebrew on my original DS because I used WifiMe.

You can see what version firmware your DS is by following these steps:

Put a DS game into your DS, but don't start the game
Go to "pictochat room A"
Take out the DS game, do not worry, it will not harm your DS!
Now take note of what happens and compare it with this list
- FW1: DS will freeze, when you remove the card.
- FW2: A Grayish Blue screen is shown
- FW3: A Dark Green screen is shown
- FW4: A Yellow screen is shown
- FW5: A Magenta (purple-/red-type of color) screen is shown
- iQue FW: A Dark Green Screen is shown.
- FlashMe: A Dark Green Screen is shown

Note: Dark Green; If you do not have a Chinese DS, and have not flashed your DS, you have firmware v3.

Thanks to MaHe for figuring this out.

Now that you know what version firmware you have, you can (partially) choose the passthrough method.

If you have an original DS I suggest you Flash your DS, using FlashMe. This does require you to have another passthrough method at least once. When you are capable of using WifiMe I suggest you use WifiMe to flash your DS. But you can also buy a PassMe or NoPass (the cheapest and best other options, though a PassMe2 will also work).

When you have firmware version one, two or three you can use any type of passthrough. However if you have a higher firmware version you will need either a NoPass or a PassMe2 to flash.

You can also choose to buy a NoPass, PassMe1 or PassMe2 and keep using that. That does mean you do not have the safety code, but it does keep your warranty intact.

However when you buy a PassMe2 bare in mind your GBA media (adapter) card will need to have SRAM (thus GBAMP will not work). As you can see you should also have an idea on what GBA device you must buy and use. Read the rest of this guide to get an idea on what GBA device you want.

Part 4: Saving the data

Storing Homebrew applications

You have learned that DS homebrew boots from the GBA slot, and how you can get your DS to boot from the GBA slot (in DS mode). It is now time to choose between GBA media (adapters).

There are very many different producers GBA media (adapters) cards.
I make a general difference between GBA media cards (GBA flash cards) and GBA media adapters.

GBA flash cards[4]

A GBA flash card is a GBA game card that you can flash yourself, an example is the EFA linker 1, which is shown below:

These cards were originally developed for use with the GBA, but with the correct card you can also run Nintendo DS homebrew.

Because these cards have been around for quite a while, there are many different producers and they are also widely available (also on second-hand markets). But since they have been around for so long, and were meant for use with the GBA, their size is limited: the biggest ones are usually 1024Mbit or 512Mbit. The G6 is an exception.

When you boot homebrew, you will have to perform certain steps before it can boot from your GBA flash card. These steps vary for each card and brand, so I will not describe how to do this.

Some cards come with their own software to help you with that process, others come only with software to let you flash data to the card and others come without software at all.

I do not recommend buying a new GBA flash card. If you have one already it is a nice point to start you off, but I would get a media adapter instead soon after getting homebrew to run.

Maybe when you are able to buy a GBA flash card very cheap you can consider it, else you are better of with a media adapter. There is however, also the G6 flash adapter:

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4   top; EFA linker 1
        bottom right; G6flash 3d generation
        bottom left; 2xG6flash lite (3d generation G6flash) for DSlite

This is also a GBA flash card, but it has been newly made. Their aim is to have a GBA flash card that is fully compatible with the Nintendo DS in Nintendo DS mode, and still have GBA functionality.

The size of this GBA flash card is also much larger (at the time of writing the maximum is 4Gbit, which is equal to 512Mb).

GBA media adapters

There are also adapters that make your GBA slot into a memory card slot.

There are many different producers of these cards, all with different compatibilities and abilities.

GBA media adapters have the biggest size of all, as these are only limited to your memory card.

When buying a GBA media adapter, you should read as many reviews as possible about the product.

And also try to ask around at forums that are related to the homebrew you are trying to run if the card you are interested in is supported and a good choice for you.

For example the GBAMP V2 is a very nice choice for most homebrew, as most homebrew supports it; however DSlinux is not able to run at its full capabilities on it.

The SuperCard CF is a very good choice for DSlinux, but also has it's drawbacks (the worst thing in my opinion is the CompactFlash card sticking out).

There are also the M3 series and the EZ-flash series. I have not yet had a chance to review those products, and thus have only limited knowledge of them. I am however to receive a M3 for review soon.

I've reviewed a few products, and you can read those reviews on my NDS website. I.e. my GBAMP V2 review and my SuperCard (all versions) review. I will cover most GBA media adapters in this guide (that I know of).

Part 5: Running homebrew

Running the software applications

When running homebrew, there are a few things (that apply in general) you should know about.

File extensions
There are a few file extensions in the Nintendo DS homebrew scene (thanks Tepples and Natrium42 for the explanation). These are (there are more, but I have never come across any):

.nds
.ds.gba
.sc.nds
.gba.nds

.nds
This is a binary for the Nintendo DS that loads into RAM. It consists of a header, an ARM7 region, and an ARM9 region. FlashMe+WMB and GBA Movie Player support this. Generally you use this file type to start with, and run it through the different steps needed for each card.

.ds.gba
This is a binary for the Nintendo DS designed to run from GBA ROM. It usually consists of a small loader, a .nds file, and zero or more appended data files. The code in the ds.gba file reads from the appended data files using reads from GBA ROM space. Flash carts, M3, and SuperCard* support this (* see sc.nds/.gba.nds). You use this type file if you use a GBA flash card (G6lite also takes .nds files).

.sc.nds/.gba.nds
The SuperCard firmware seems to think that .nds is the extension for a ds.gba program. When using the DS for SuperCard homebrew, use ds.gba files but rename them to something with .nds at the end. Because this is very unclear when distributing homebrew, the .gba.nds and .sc.nds file extensions have been thought up.

Converting .nds to .ds.gba
.nds files can be made into .ds.gba files by adding a .nds loader to them. One such ndsloader is ndsloader.bin. There are a number of tools to do this, but if you have the bin file you can do this yourself. You use (Windows) the command:

copy /b ndsloader.bin <.nds file you want to patch> <patched file>

SRAM homebrew
SRAM homebrew doesn't have a special extension, but is normally only available in the .ds.gba format. This homebrew requires SRAM to be present on your GBA media (adapter) for saving or other purposes. Usually with SRAM requiring homebrew, there is also a FAT lib version.

FAT lib homebrew
This is homebrew that needs a GBA media (adapter) card compatible with the FAT lib. This FAT lib is a developers tool that supports writing to the different GBA media (adapter) cards. However not all cards are supported. This is also doesn't have a specific extension.

The Nintendo DS virus

Sadly a Nintendo DS virus has been made.

This virus deletes your Nintendo DS's firmware.

It has been disguised as a homebrew program, and is only known to be released in two forms.

-taihen.zip, which claims to be a hentai viewer, is: (.nds size 548,673 bytes)

-r0mloader.zip, which claims to be a rom loader for those not using the commercial flash-carts, is: (.nds size 151,361 bytes)

They have not been seen in a while, but always be weary.

FlashMe prevents bricking (ref.: footnote page 7) your DS by saving a small bit of rescue code in the Nintendo DS's firmware. This bit of code cannot be deleted unless SL1 (a bridging point on the Nintendo DS's mainbord) is bridged. When all other firmware has been deleted this code lets you reinstall FlashMe. Obviously this requires you to have installed FlashMe.

SL1 opening in a original Nintendo DS (battery cover removed, sticker left on)
Thank you Lynx: http://www.dspassme.com/FlashMe.shtml
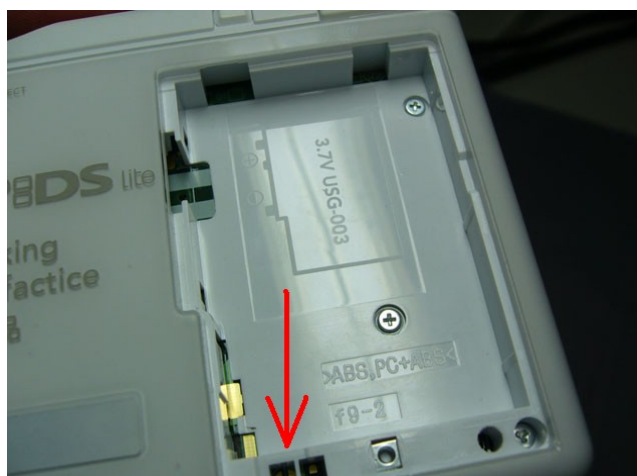
SL1 opening in a Nintendo DS lite (battery cover and battery removed)
Thank you kotaku.com: http://cache.kotaku.com/gaming/dsc7.jpg

Part 6: Reviews/Overall of GBA media (adapters)
There are many, but what's the difference between all of them?

I've made my reviews before this guide was released (they are a part of this guide), and they can be viewed on my website: http://www.simonvandeberg.be/nifi
These reviews do not go in depth on how to run homebrew, and also focus on other things then specifically running homebrew.
I will try to cover most devices (that I know of) and their different features.

SuperCard: Thanks to http://www.SupercardStore.com

The SuperCard (often shortened SC) series is composed out of four different media adapters.
The SuperCard-CF (SC-CF)

This version of the SuperCard is the first SuperCard to be released.
It uses Compact Flash cards as it's storage space. A big down point to this bit of hardware is that the CF card sticks out (at top) unprotected.
The SuperCard-SD (SC-SD)

This version of the SuperCard is similar to the SuperCard-CF but uses SD cards as it's storage. The SD card is fully encapsulated in the SuperCard.
The SuperCard-miniSD (SC-mSD)

This version of the SuperCard takes miniSD cards, thus the size of the card has been reduced to a normal GBA card. Another feature added in this version is the SRAM battery.
The SuperCard-lite (SC-L)

This version of the SuperCard has been made to fit flush in the new Nintendo DS lite and takes microSD cards. It is quite new, and not all homebrew supports it yet. However, seeing as it uses microSD cards and is a fairly widespread product this might change quickly.

As stated before, the SuperCard works with .ds.gba files (but named .nds). The CF,SD,mSD versions work with most FAT requiring homebrew, and the SC-L is said to support quite a lot too (though not as good or as easy). SuperCard recently had a problem with being copied. There came SuperCard SD and miniSD versions not produced by SuperCard. As no store prides in having these "fakes" I was unable to procure one or hear how well they perform from anyone else then SuperCard itself. The SuperCard is one of the more preferred homebrew FAT devices as the FAT library (modified SaTa version for SD and miniSD support) supports these cards.

GBAMP V2

This device was one of the first devices supported by NDS homebrew, and is most widely spread among developers. It is also quite cheap, and of fairly good build quality. This version takes Compact Flash cards, there is also an SD version which does not support NDS homebrew at this time. There is one homebrew application that is not so fond of the GBAMP which is DSlinux. DSlinux runs fine with the GBAMP, but do to technical reasons only very little RAM is free and thus it crashes regularly. With almost any other homebrew, exceptions being homebrew that uses SRAM instead of FAT, this is the cheapest option. The GBAMP is compatible with .nds homebrew and FAT homebrew.

G6(lite): Thanks to http://www.G6flash.com

The G6lite is one of the few GBA flashcards keeping up to date for NDS homebrew. Sadly, there is no FAT lib for this device (other then a special modified version of MoonShell). Both .nds and .ds.gba work with the G6lite, either when using the PC patcher or with the card itself.

M3 series (M3 lite): Thanks to http://www.G6flash.com / http://m3adapter.com

The M3 series is also composed out of four different cards.
M3-CF

This is the Compact Flash version of the M3 adapter series, and the first to be released. It is similar to the GBAMP V2. It works with .nds homebrew, FAT homebrew and SRAM homebrew.
M3-SD

This is the Secure Digital version of the M3 adapter series. It is slightly bigger then a normal GBA card. It is similar to the GBAMP V2 SD version, but does support NDS homebrew (and FAT homebrew with the modified FAT library) and SRAM homebrew.
M3-miniSD

This is the Mini Secure Digital version of the M3 adapter series. It sticks out slightly from the normal DS. It supports NDS homebrew (and FAT homebrew with the modified FAT library) and SRAM homebrew.
M3Lite (yet to be released)

This is the (still to be released) M3 lite. It has been designed to fit flush in the Nintendo DS lite, and will most probably have changeable cases. I am to receive a sample soon, and hope to be able to provide a good review soon. At the moment I can but speculate it will work close to the same as the SC-lite when it comes to supporting FAT homebrew. As for other homebrew, it will probably support the same homebrew as the other M3 adapters.

Ewin2 series: Thanks to http://BamBooGaming.com

There is pretty much nothing known about these cards at this time, except that there are three versions: miniSD, SD, and microSD.

It advertises as a NDS backup card, but I am to receive a sample of the microSD version from http://www.BamBooGaming.com to see if homebrew will run. I can however already confirm that .nds homebrew works, but not to what extent. When however things get developed, this could be the cheapest (small) homebrew solution at 25 Euo's.

EZ-flash

EZ-flash has also made a number of products for the Nintendo DS. They have made both GBA flash cards and GBA media adapters.

Their first three products were GBA flash cards, and thus supported .ds.gba homebrew.

Their fourth and most recent product however is a GBA media adapter, the EZ-flash IV.

It comes in both an DS and DSlite form.
The DS version uses miniSD cards, and the DSlite version uses microSD cards.
I do not own this product, and have very little experience with it.
I believe it can run both .ds.gba and .nds homebrew but I am very unsure on this point.

NeoFlash

NeoFlash has produced a lot of products for the NDS, both for the NDS and GBA slot. Their first product (series) was a GBA flash card.

It comes (if you can still get one) with a NeoKey (MK1) which is simply a PassMe1. I believe it ran .ds.gba homebrew, but I am unsure (and seeing as getting this hardware will be rather hard, unimportant).


They then came with the NeoMax kit. This is pretty much the same hardware, only bigger and with the MK2. The MK2 is interesting here, as it has a SD card slot from which games could be read. It supports .nds homebrew. Their latest released DS-slot product is the MK3, which has some new features. It also runs .nds homebrew. Although what I've heard (I do not have any NeoFlash hardware) the homebrew compatibility isn't really great with these devices.

Something that is very nice of NeoFlash is that they hand(ed) out free development kits to homebrew developers.

They have two products in development right now, the Neo2-SD / Neo2-TF (microSD).
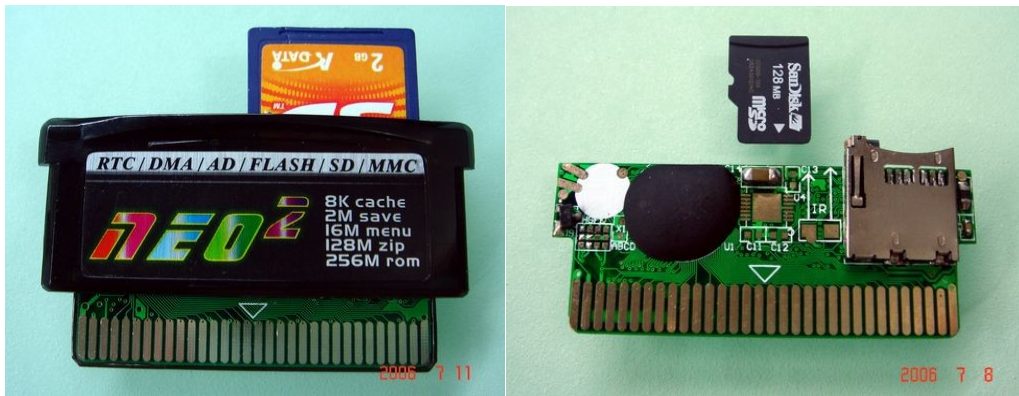
It will probably be able to run .ds.gba homebrew, and possibly in the future FAT homebrew (though I feel that is not very probable). I am unsure whether SRAM homebrew will work. And the MK4-SD

The MK4-SD will probably be able to run .nds homebrew.

Part 7: What hardware to choose

All GBA media (adapter) cards have different features, and different compatibilities, so what do I choose?

What hardware you choose is entirely up to you. There are different things to take in to account:

-Cost
-Compatibility
-Features
-Looks
-Build quality

Costs

You must choose how much you want to spend. You can from about 20-25 Euro's to up to 200 Euro's. What I have found to work is to pick a general amount you would be willing to spend and look for a card in that region. Then look at the other points to see if there is a card that matches your wishes in your price range. If there is one you are lucky and could try to find a cheaper one. If there isn't you will have to pay some more.

Compatibility

The different cards have different compatibilities. And you need to choose what kind of compatibilities you want. There is the simple .nds and .ds.gba (.nds can be converted into .ds.gba, **but** not the other way around) compatibility, FAT lib compatibility and SRAM compatibility. Most .nds homebrew will probably run on every card I describe. FAT lib homebrew is another story. SRAM homebrew is another story as well. Try to find out what homebrew you like, and then see what type of homebrew it is (homebrew usually comes in different forms, ScummVM for example comes in FAT lib and SRAM .ds.gba form).

Features

The different GBA media (adapter) cards have different features. For example some have movie playing support. You will have to choose how important/cool these features are to you, and if you are willing to pay extra for them. The best way to learn more about the features of a product is reading a few reviews about them. You can then get a fairly good idea on how well the features perform.

Looks

There are many different ways a card can look. Some have see-through cartridges, others try to look as much as an original card. Beauty is in the eye of the beholder, and you will have to decide if you want to go the extra mile for looks. Something that has been developing in the GBA media (adapter) scene is the DSlite sized cards. This is also something you have to choose for yourself.

Build Quality

The build quality is something that (I feel) is quite important. The best way to see if people like the build quality of the product is reading reviews and hanging around user forums. If a lot of people complain about something, chances are it really is an issue. You then decide whether you feel it will also be a problem for you.

When you have gone over all these points and think you have found a nice card, you will probably not be disappointed. Though remember products are always in development.
So when you buy your new kit, there will be a new product in a few months that might be better.

Part 8: A list of homebrew

So I can run homebrew, what kind of homebrew is out there?

This is a list of homebrew, but by far all homebrew and probably not fully up to date. When browsing for homebrew, it is a good idea to install DSorganize and use their Homebrew Database function.
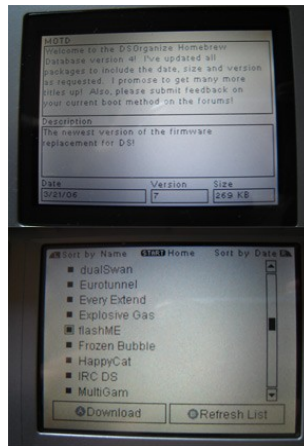
Their homebrew database can be trusted, and will have the most up to date versions. And when you use the DSorganize version for your GBA media (adapter) you will always be able to download the correct version for your device (unless special patches are needed). DSorganize can be found at http://www.dragonminded.com. I suggest you will at least try ScummVM (Beneath a Steel Sky and Flight of the Amazon queen are now freeware, see the ScummVM homepage for details), DSorganize and DSlinux. This list (as seen in this document) was last updated at the tenth of august 2006.
Thanks to DSorganize and their team for making their homebrew database.

--------------------------NDS Homebrew List--------------------------

A Touch of War - A very good looking RTS game for the DS by JimmyL.

Arcomage - A card game for the ds

AXE - A very simple yet intersting music making game for the DS that revolves around the touch screen.

beup - An MSN client for the DS.

Blubb - A mix of Battleships and Minesweeper, written by qw3rty.

Chaos DS - A strategy game on the ZX Spectrum, ported to the DS by bob_fossil.

Collection - Appears to be a collection of games. Visit dustin's DS dev site for more info.

Diamantes Rocas DS - A simple puzzle game for the DS involving lining up colors.

Digger DS - A port of the classic Digger game to DS by Sektor. One of my favorite games!

Dissonance - A beta streaming shoutcast client from Dave Brady. Plays only his station.

Draw 3 - A nifty drawing app by Davr that has become quite impressive.

DrugWars DS - DrugWars DS was made by DragonMinded as his first fully functional homebrew project.

Drummers - A drum sequencer application by Lein.

DSAcademy - A brain training style game for the Nintendo DS.

DSaim - Aim for the DS.

dsDoom - Doom for on your Nintendo DS! (no WAD file included)

DSLinux - An operating system based on uClinux, has retawq; internetting on your DS

DSlurper - A basic, yet nifty tool for HTTP downloading directly to your flash media. Work in progress.

DSMinesweep - Does this really need a description? This is a minesweeper app for the DS.

DSOrganize – An organizer for your DS. Read up on www.dragonminded.com for more info.

dualSwan - A WonderSwan emulator for the Nintendo DS, written by LiraNuna.

Eurotunnel - A 3D flying-game by Tassu where you steer with the stylus and collect euros. Very addicting!

Every Extend - A game played using bombs which is being ported to DS by Goldohulk.

Explosive Gas - A BomberMan style game by JimmyL and friends.

FlashMe - The firmware replacement for DS!

Frozen Bubble - A Bust-a-move clone by Jed at jdoucet.net

FWnitro - Firmware Replacement

HappyCat - The HappyCat demo was put out by DragonMinded as a joke.

IRC DS - An IRC application for the DS by davido2. Edit the .ini file for options.

MultiGam - Seems to be another multiple game package out, this time by zzo38computer.

ndsMail - A simple mail application in development on the DS.

nesDS - A Nintendo Entertainment System emulator.

NetHack DS - A port of NetHack from the PC to the DS by Wosret.

Nitrotracker - A FastTracker II style tracker for the Nintendo DS. Written by 0xtob.

No Place To Hide - A collection of minigames from Birslip. Wifi is working again in this version.

Oil Panic DS - A game by Mia, simulating the Game and Watch game of the same name.

Omalone - A board game specifically for the DS. Written by Alx, Mvx, Gentil_Graphiste, and DMA-SC.

Orkus - A puzzle game put out apparently by a person of the same name.

PASudoku - A sudoku game by PBone featuring 100 Sudoku puzzles spread over 3 difficulty settings.

PhotoCupDS - Find the differences between to photos. Compete against someone, or play together.

PicoDriveDS - A Genesis emulator ported to the DS by Ryan FB

Pizza Worm DS - A port from the same title on the PC by Turambar.

Puerto Rico DS - A port of the german board game of the same name by Justin. This version works with wifi.

RType Clone - An RType clone demo put out by Octobinz.

Rubber Bands - A simple game put out by walaber using his physics engine.

ScummVM - A port of the Scumm game player to the DS by agentq.

snesDS - A snes emulator with limited compatibility.

Sopwith - A classic sidescrolling plane shooter ported to the DS by the lazy one.

Spout DS - A small, abstract shooting game from Japanese developer kuni. Ported to DS by Birslip.

Sprites Out - A lights out style game with Nintendo sprites by chadkeck.

Stone Age – A port/remake puzzle game of the great DOS game Stone Age written by hdxs.

SylphAMP - A winamp output interface allowing streaming. Get the winamp plugin from ficedula's site.

SylphIRC - An IRC client for the DS.

Tales of Dagur - A RPG made by LiraNuna that won the NeoFlash spring competition.

Temby! Towers DS - A clone of Yahoo! Towers for the DS.

Touch Touch Revolution - A DDR game that was just begging to come out for DS. Early alpha release, all hardcoded for now.

Wolf3D Demo - A port of Wolfenstein to the DS, still in development.

Part 9: Links

Useful places when and before running homebrew.

The Internet is very big and I am bound to forget websites. But I will try to give a good starting point.

Buying Hardware

Buying hardware from the Internet is something people are always unsure about. These Internet sites are very good for getting your hardware, or as a starting point.

For the G6(lite): http://www.G6flash.com/
For the M3(lite): http://www.M3adapter.com/
For the SuperCard: http://www.SuperCardStore.com/
For the Ewin2 and a lot of other hardware: http://www.BamBooGaming.com/

News sites

There are many good NDS homebrew news sites on the Internet, but these are among the most well know/best.

DrunkenCoders: http://www.drunkencoders.com/
DCemu: http://nintendo-ds.DCemu.co.uk/

General sites/Development

These are sites that have a lot of things, but among other things Nintendo DS homebrew news homebrew development and other Nintendo DS homebrew related articles.

Gbdev: http://forum.gbadev.org/
DSlinux (view with FireFox): http://www.dslinux.org/
My own webpage: http://www.simonvandeberg.be/nifi
Lynx's DSPassMe: http://www.dspassme.com/
DSorganize howto/guide: http://l33t.spod.org/ratx/scdev/compo/raz/
A programming guide to the Nintendo DS: http://www.patatersoft.info/manual.html
An overview of homebrew at this time: http://www.modojo.com/features/103/1/

Part 10: Final words

What's left to be said?

I hope you now have a good idea on what DS homebrewing is all about. And that this guide has motivated you to start running homebrew on your DS. If you have any tips or comments you can send them to scorpei.nds [at] bluebottle [dot] com , or look around on forums for me. Remember the things that you read in this guide well, and you should find your way around.

While writing what you have just read, more then too products have been announced. And quite a few homebrew apps/games have been released or announced too. I will keep updating this guide and to try to keep it up to date.

When you feel I have forgotten something, for instance I do not know about your GBA media (adapter) product (or other homebrew product) and haven't covered it in my guide, feel free to contact me. I would gladly incorporate it, and test out the different homebrew capabilities.

All there is left to say for me, is have fun homebrewing! When on a forum you ask a question it's possible that the answer (if the answer is given) won't be very nice. Chances are you have asked something that has been asked a very many times. Don't be discouraged, and try to find the answer via search functions and etc.. The only thing I can say about that, is when **you** do know more try to be nice to other people. That doesn't mean that you need to post the same answer over and over and over, just that you can point new people in the right direction (my guide for example) in a friendly way. On the DSlinux forums, pointing to the corresponding page in the Wiki is a very good idea. Fun is the foremost reason I started homebrewing, and having a friendly community is one of the needed factors ;).

I hope you have had as much fun reading this guide, as I've done making it.
If you like it, please spread the word.

Yours,
Simon

Part 11: FAQ

Still have questions?

In the future any questions I get will be put in here (if I think they should be in here). Then you can look here for reference if you feel something hasn't been answered in my guide or if you still have questions.