EZV, 3-in-1 & Hybrid Tool Manual

Last Updated: March 13th, 2007

Introduction

Welcome to the EZV, 3-in-1 and EZV Hybrid Tool Manual, I hope you enjoy the read and learn as well. First of all, let's get some terms out of the way. From now on, any reference to "EZV" means the actual EZV cartridge that looks like a normal DS game and "3-in-1" refers to the cartridge that looks like the GBA slot dust cover. References to "game" generally refer to a ROM, unless otherwise specified. References to the "Hybrid Tool" will refer to the EZV Hybrid Tool and "EZ4 Client" refers to the EZ4 Client. And finally, references to "Micro-SD" obviously refer to the Micro-SD/TransFlash memory card that is inserted into the EZV.

A few conventions for text formatting are used as well: Specific files or directories mentioned will be in *italics* like *ezsave.lst*. Commands will be "quoted" and in **bold** such as "**chkdsk x: /f /r /x**". And finally, buttons on the DS will be <u>underlined</u> such as "press <u>L</u>+ <u>R</u> to open the settings menu." Also, when it comes to kilobytes, megabytes and gigabytes I will always refer to them in lowercase and are in multiples of 1024 like they should be.

The goal of this manual is to help you use your EZV, but it is also intended to educate you as well. So rather than just listing blind steps, it will attempt to explain as much as possible how and why something is done instead of just listing the steps to be done in a zombie-like trance. Please don't expect to find detailed step by step directions to do everything, rather I expect you to read this entire manual and gain knowledge so that you can better understand your new toy.

Please use the date in the last update to gauge how accurate the information contained is. Obviously, the closer the manual is to the current date, the better and more accurate it should be. I will try to keep it updated and am open to suggestions for added content and corrections.

Unpacking

The box and the EZV cart.

The first thing you will want to do is unpack your EZV and make sure that everything is there and accounted for. If you have trouble opening the package, please contact your nearest adult for help. Once you have opened the package, you will find inside a plastic shipping holder and your EZ5. Typically, there is nothing else though you are of course welcome to look. Perhaps if you ordered the EZV + 3-in-1 expansion, this will be included. If you were looking for a small manual or CD, go ahead and stop. Nothing useful like that is included, though I don't think this is abnormal for the market.

Requirements

What you will need is simple and obvious: To start with, you will need a Micro-SD flash memory card. There are a number of suggested Micro-SD cards and your goal should be to find one that is considered both fast and compatible. Since new items are released quickly and often, it is best to check on the internet to find the current best deal on the best Micro-SD cards at the time. Keep in mind that DS games range in size from 4MB to 128MB when deciding on a size. At this time, the 1GB cards seem to be the best purchase, but if you want even more games, you might find that a 2GB card works just as well and isn't terribly expensive.

The next required item will make you slap your forehead if you don't already own one. It is of course either a Nintendo DS or Nintendo DS Lite. Without one of these, your EZ5 is not even useful as a paper weight because it is so damn small!

The final requirements can all be lumped into one paragraph. You'll need a computer, an SD card reader and the internet. Most Micro-SD cards should come with a Micro-SD to SD adapter, so you should only need an SD reader for your computer. The reason you need the first two is obvious, otherwise how would you get your games onto the Micro-SD card? The internet requirement is to keep your Hybrid Tool, EZ5 kernel and game save size list all up to date. If you never want to add newly released games to your Micro-SD card, keeping everything up to date won't be required, but I think it's a good idea.

Sources of Files and Information

There are a few places on the internet to get the very latest software and information for the EZV. Of course, one of the best sites is the EZ Flash website. Another great source where you can get help, find information and download the latest updates, patches and files is the forums and wiki run by Sosuke at EZ-Flash.sosuke.com. Keep in mind that the forums and wiki are run as a volunteer, non-profit endeavor… so don't arrive there thinking you are owed something. If you feel you are owed, try the EZ-Flash team's site or the company you purchased your EZV from.

Getting Started

As well as formatting the Micro-SD card, there are a few things you will need to download and some optional items to get the very best experience with your EZV. The most important in my opinion is the latest kernel, which at the time of writing is 1.3.6. This version fixed a number of issues, including save file corruption. I strongly consider this the first thing you should do. The file you download will probably be named something like *ez5kernel070213.ZIP* and will contain the file *ez5upldr.bin*. Another item you should get is the EZ5 Hybrid Tool which might be named something like *ez5hybridtool-v101.rar* and contain a whole slew of files and directories. Finally, and most importantly, you will need the "shell" which is the interface you will be using on your EZ5 in the DS. It will be named along the lines of *ez5shell070105.ZIP* or *ez5shell_vista070105.ZIP* depending on which theme you choose and the date it was released and will contain a directory named *shell* with many files and folders inside it.

- Formatting

The first thing to do is insert your Micro-SD card into your reader on your computer. Now format it with the FAT32 file system and if you wish, a 4096 byte cluster size. I have also seen 8192 recommended,

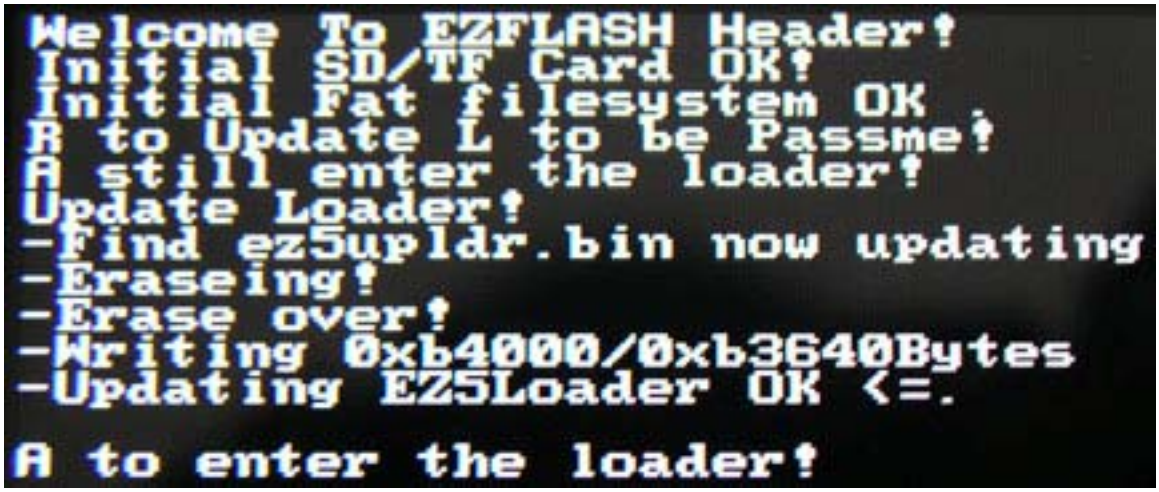
so if you would like to experiment, go ahead. While the cluster size doesn't necessarily have to be set to this, it seems to be a recommended and may solve some problems for some people, at the very least, it doesn't hurt. The easy way to do this is to click start, then run, then enter "**cmd**" and press OK. At the command prompt, type "**format X: /fs:fat32 /a:4096 /v:NAME /x**". You will need to replace "**X:**" with the letter for your drive and "NAME" with what you would like to call this Micro-SD card. Naming it is optional, if you wish you can remove the "**/v:NAME**" entirely. The "**/fs:fat32**" option specifies FAT32 (duh?) and the "**/a:4096**" specifies the cluster size. The "**/x**" at the end tells it to forcefully dismounts the volume first, in case you have any files or folders open on it.

- Inserting the EZV

To some, where to put the EZV cart is obvious. In fact, I would wager that most people don't even have to ask this question. But since I took some images of where it should go, I am not only going to tell you, I am going to show you as well. First, the text: The EZV is a slot 1 cartridge and goes in the slot labeled "SLOT 1." This is the place you are putting DS games currently.

The correct and incorrect way of inserting the EZV.

Updating the Kernal



The screen seen during an EZV kernel update.

To update the kernel, the *ez5updr.bin* file is copied to the root of the Micro-SD card. Optionally, you can set the file to "hidden" which will allow everything to work, but you won't see the file in the file explorer later. You then put the Micro-SD card into the EZ5, the EZ5 into the DS and turn the DS on. Boot the EZ5 cart while holding the R shoulder button down. It will prompt you to either update by pressing R or be a passme by pressing L. Press the R shoulder button and wait while it updates the EZ5Loader. At this point, you can delete the file if you wish to save about 1MB, but I personally leave it on there "hidden" just in case.

- Copying the Shell Folder

Next you will need to copy the shell folder to the Micro-SD card. If you like, you can set the properties of the folder to "hidden" which will keep it from showing up in the file listing while allowing everything to function just fine (Alternatively, you can browse to the *shell* folder of your Micro-SD, open up *global.ini,* browse to the [HiddenItem] section and just change Path_Shell to 1). At this point you may also wish to obtain an up to date copy of the *ezsave.lst* file and copy it to the *shell* directory as well. This file is responsible for the save game sizes, so it needs to be updated for new games.

- Hybrid Tool

Finally, you probably want to get and setup the EZ5 Hybrid Tool. You can extract and place the directory where ever you wish on your PC. I picked *c:\program files* but you are welcome to put it wherever you want. The file *EZ5 HYBRID Tool.exe* is what you will be running to patch and trim games. If you point the program at

your Micro-SD card's path, it will send them right to it. Otherwise, you can simply patch and trim your games onto your hard drive and copy over whenever you wish. *EZ4Patch.dll* and *romname.lst* can both be found in relation with the EZIV and is likely used by the Hybrid Tool to patch NDS/GBA games, but r*omname.lst* isn't very important to the Hybrid Tool as you use the EZIV Client to send GBA games to the 3-in-1 expansion.

- EZ4 Client

If you have the 3-in-1 expansion and you plan on playing GBA games, you will need to get and setup the EZ4 Client similar to the EZ5 Hybrid tool. The *EZ4Patch.dll* and *romname.lst* both came from this, so chances are you've run across it.

Getting Games to the Micro-SD Card

There are three methods of moving games to the Micro-SD card, all with their own advantages and disadvantages. Which you choose is up to you and the game, as some will only work or will work better with one method or the other.

- Drag & Drop

While simple, this method works best for users with good, fairly fast (approximately 7 or lower) Micro-SD cards. Unfortunately, due to the fact that games are padded to make them even sizes of 8, 16, 32, 64, and 128MB, this method results in the waste of perfectly good space. Some games will exhibit slow downs or other odd behavior, and this is usually a sign that you should patch it or change your Micro-SD card's speed setting.

- Trimming

This method isn't much harder than the first; it simply requires use of a trimming tool and will result in a smaller game. It is possible that trimming can cause download multi-play to not work in some games. As with drag & drop, if a game exhibits slow downs or odd behavior, it is usually a sign that you need to patch the game or change your Micro-SD card's speed setting. The Hybrid Tool can trim games, but so can many other tools, as it is a very simple operation. The C++ code for compiling a Linux tool that does this is only about a page long. The R4/M3 Trimming tool is not recommended, as it's known to overtrim ROMs.

- Patching & Trimming

This method requires the most amount of work because you need to use an up to date Hybrid Tool to patch the latest games. This method is also one of the best methods because it patches the games to be more compatible, includes "in-game-reset" and trims the game at the same time. One game that benefits from this greatly is Animal Crossing: Wild World.

- Conclusion

Which of these methods you choose depends entirely on you and the games you play. To fit the most games onto your Micro-SD card, I would strongly suggest at least trimming your games. Once you have decided to trim them, it isn't much more work to go ahead and patch them as well (basically, just ticking one or two check box). So in the end, the 3rd method isn't going to take much extra time and adds enough to make it valuable.

Shell Usage

Finally we move on to the good stuff. Actually using the shell is very intuitive and quite easy. For the most part, selecting is done with A and canceling is done with B. The one major exception to this is in the settings menu, which personally annoys me every time I see it. WHY DOES B SAVE IN THIS PLACE ONLY??? L + R opens the settings menu and the Start button will bring up a help screen. Pressing L + X or L + Y with a game highlighted will cycle through the save size types.

- Settings

Pressing the L and R buttons at the same time will allow you to change the settings, of which there are very few. These include the language, the Micro-SD card speed settings and vibration (for the 3-in-1 expansion).

- Language

This should be quite obvious, it picks the language. As far as I can tell the choices are Chinese and English. Pick the one you best understand.

- Speed

The most important of all of them is the speed setting and it ranges from 1 to 12 with 1 being fastest. Generally speaking, good cards will be in the 1-5 range and if you are buying a new card, this should be your goal. If many games are not working, you can try changing

the speed setting faster or slower and see if it helps. There is also an auto detect setting, but specifying a speed manually seems to work best.

- Vibration

This setting only applies to users of the 3-in-1 expansion which I do not have. If you have information to add to this, please help out. If you have a 3-in-1 expansion to send me, I'll be happy to expand the related sections.

3-in-1 Expansion Usage

If you have this, there are a few extra things you need to deal with. First, to play a GBA game you will need to write it to the NOR and if you have a save file for that game, it will also need to be written to the SRAM. You'll also need to remember to backup the save file from SRAM to your Micro-SD card. The 3-in-1 expansion works by writing one GBA game to it at a time, and this can take a while for each game. It doesn't orient itself toward trying many GBA games, but it works great if you only play one or two or simply want to pair a GBA game with a DS game. You can also put the device into another DS once the GBA game is written, so it isn't tied to the EZV cartridge. You will need to patch any GBA games with the EZ4 Client to play them on the 3-in-1.

It also adds rumble and browser support, which is at least a nice bonus. Make sure the *ezsave.lst* in your *shell* folder of the Micro-SD card is as current as possible, as this is how the rumble supported games are identified by the EZV and the 3-in-1 expansion.

- Writing GBA game to NOR

To write a GBA game to the NOR, navigate to it using the EZV shell and press R + Select. It will ask for confirmation, but provide no hint as to which button is Yes and which is No. It follows the Nintendo standard here, with A being Yes and B being No. This takes a while, as it first erases the old game and then writes the new one.

- Writing GBA save file to SRAM

To write a GBA game's save file to the SRAM, navigate to it in the *GBASAVE* folder on the Micro-SD card and press R + Y. Again, A is Yes and B is No even if it doesn't tell you.

- Writing GBA save file from SRAM to Micro-SD

To write a GBA game's save file from the SRAM to the Micro-SD card, press R + X and it will be written to the *GBASAVE* folder.

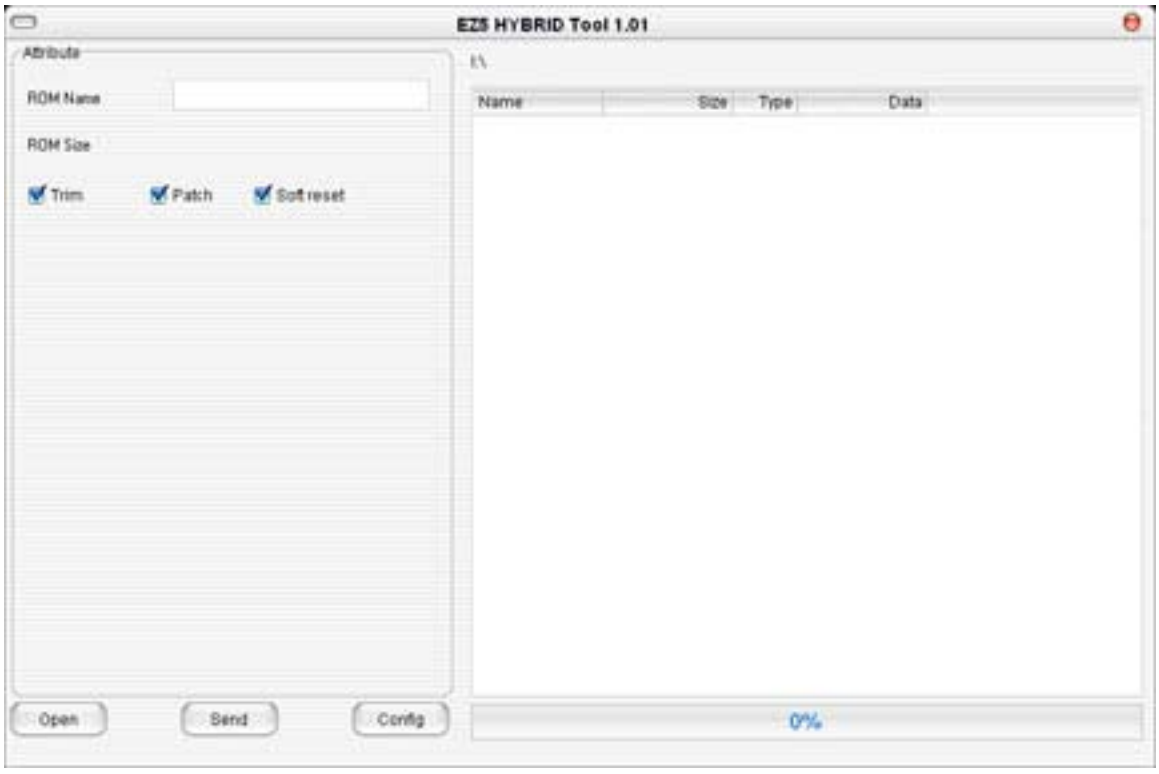
- Launch current GBA game

To launch the GBA game that is currently written to the NOR, press R + A. Please note, this simply launches the game that is already on the NOR, so don't be surprised when you navigate to a game you want to play, press R + A and find yourself not playing the game you wanted to play.

Passme Usage

The EZV can be used as a passme device, which will allow you to easily use a Slot-2 cart if you like. The built in method of doing so is to hold the R button while booting, and pressing L in the bootstrap. However there are actually better ways of using the feature. The program **EZResetDS** by cory1492 is a DS application that you can run from the shell which will reset the EZ5 in passme mode. This is far easier than trying to remember to hold down the R button.

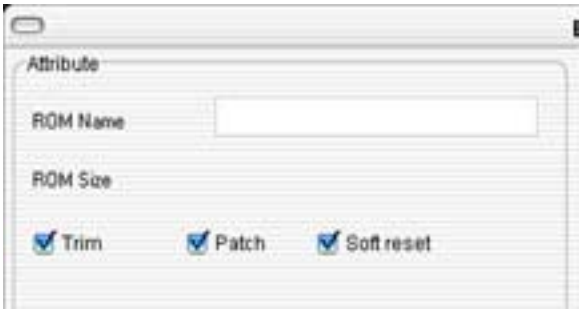
EZV Hybrid Tool Usage



Screenshot of the EZV Hybrid Tool.

The Hybrid Tool is what you use to patch DS games and transfer them right to your Micro-SD card (or anywhere else if you like). The tool is actually quite simple, offering only a few configuration options and a few check boxes on the main screen. An explanation of the available items follows.

Attributes



The Attribute portion of the Hybrid Tool.

- ROM Name

When a game is opened by the client, it will read the short (and quite ugly) name and put it here. You are free to replace it with whatever you like; usually I use the long pretty name of the game.

- ROM Size

I honestly have no idea, but the name seems to imply that it is the size of the game. It might also indicate the size of the save game, but when I load up a game it doesn't show any information.

- Trim

This check box will remove the excess, useless padding that is added to games to make them even sizes of 4, 8, 16, 32, 64 or 128MB. Trimming can result in a considerable savings of space: On my 1G Micro-SD card, I was able to re-claim another 200MB by trimming all the games I had picked to put on it. For that reason, ticking this check box is highly recommended.

- Patch

This check box will patch the game and should add stability, improve compatibility and fix slowdown or display issues. I use the word "should" because of the 20 or 30 games I have patched so far, I have actually run into one that won't work patched, but works fine trimmed or clean. I still believe it is a good idea to go ahead and patch all your games, but if you find a game that won't work keep this in mind.

- Soft Reset

This check box will patch in support for in game reset, which means you can press L + Start + Select to quickly return to the shell. This is a pretty big time saver; it is much faster than resetting DS. In fact, I just go ahead and patch, trim and soft reset all my games regardless if they need them or not. Unfortunately, though the list is

small, soft reset doesn't work with all games so please keep that in mind. I have also noticed that after using soft reset a few times, it seems to get stuck and still require a manual power off.

Buttons

The buttons from the Hybrid Tool.

- Open

This is just like any other open button you have seen anywhere. This one will let you select ZIP files, NDS files and even multiple files. I actually suggest patching them one at a time though, otherwise they will end up named quite ugly.

- Send

This will send the currently opened game to the destination on the right side of the screen, which is set in the config section. Typically this is your Micro-SD card, but it doesn't have to be. I personally send my patched, trimmed and soft reset games to a directory on my computer then copy them over by hand when I want to.

- Configuration

This button opens up the configuration screen which has only three options. Send path, language select and skin. I strongly suggest closing and re-opening the application after changing any settings. It seems to me that some of the settings do not apply until it is re-opened, though I am not known for my infallibility.

They Hybrid Tool's configuration screen.

- Send Path

This is where games will be sent and typically this is set to your Micro-SD card, but it can be anywhere on your hard drive (or even a mapped network drive). Where you send your game is up to you, but I like the fact that it is much quicker writing to my hard drive.

- Language Select

This option actually says "Lanuage Select" but I went ahead and corrected their English in this manual. This is a no brainer, you get English or something else (probably Chinese).

- Skin

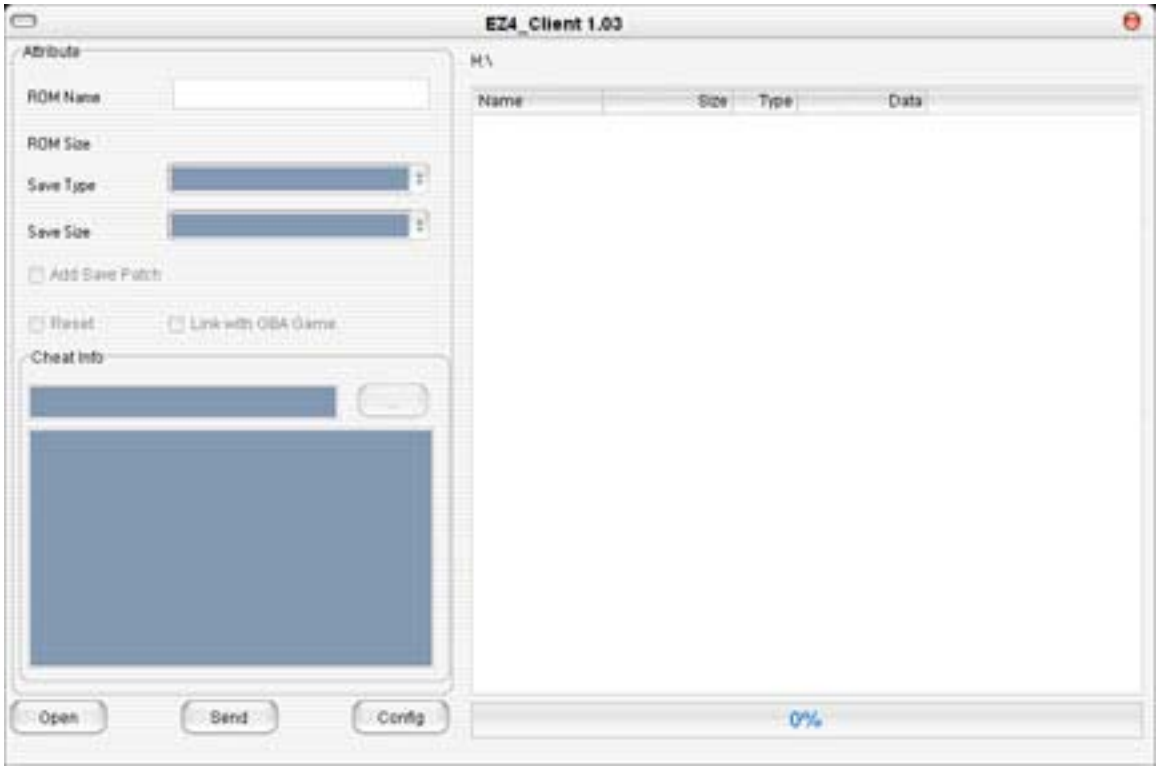
This is probably my favorite part of the Hybrid Tool. I believe the goal is to offer the user a pleasing set of options for making their program stand out and look different. As far as I can tell, they offer two themes: AquaOS and SlickOS2 (You can get more skins in the EZIV section of the EZ-Flash Sosuke forums). The first appears to mimic the Apple interface whereas the second is an orange theme. Yes, incase you were paying attention, there is no option to not use a skin so that it looks like any other application on your system. Awesome.

- Bringing It All Together

This is how everything should work when you are using the application. When you first run it, you should configure it to set where you want to send the games, what theme you want to use and what language. If you have the 3-in-1 expansion, you might want to make sure the *EZ4Patch.dll* file is updated, as the name implies this is from the EZIV Client software.

Now, using the Open button you navigate to your games and select the ZIP or NDS file(s) you wish to patch, trim or soft reset. Opening a large game may take a moment or two, and in fact, the software itself may behave as if it is frozen, but wait it out and it should be okay. Now, click send and watch the progress bar go. The bigger the game, the longer it will take. As well as the size of the game, the destination's speed will also affect how long it takes. Writing to Micro-SD cards is also a bit slower than writing to hard drives.

EZ4 Client Usage



Screenshot of the EZ4 Client.

The EZ4 Client is what is used to patch GBA games and transfer them right to your Micro-SD card (or anywhere else if you like). The tool is actually quite simple, offering only a few configuration options and a few check boxes on the main screen. An explanation of the available

items follows. While this tool is mainly used by EZIV owners, those with the EZV and 3-in-1 expansion need to use it to patch their GBA games.

Attributes

The Attribute portion of the EZ4 Client.

- ROM Name

This is the name of the game. Most of the games I tried loaded their long, pretty names so you might not have to alter this.

- ROM Size

Unlike the EZV Hybrid Tool, this field actually shows the size of the GBA game.

- Save Type

This shows the save type for the game selected. Generally, it should be correct but you can change it if you deem it necessary.

- Save Size

This is quite obviously the size of the save file.

- Add Save Patch

I assume that this does exactly what it says and believe it is required for the 3-in-1 to work with save files. You are welcome to test this if you wish. I'd suggest checking it.

- Reset

Presumably, this is like the soft reset offered by the Hybrid Tool. Unlike the EZV, this value appears to be configurable.

- Link with GBA Game

As a 3-in-1 use, you can totally ignore this. It applies only to DS games and is used by EZIV owners only.

Buttons

The buttons from the EZ4 Client.

- Open

This is just like any other open button you have seen anywhere. This one will let you select ZIP, NDS and GBA files and even multiple files. I'd suggest patching them one at a time, and of course since you are using this for the 3-in-1 expansion, you only want to bother with GBA games.

- Send

This will send the currently opened game to the destination on the right side of the screen, which is set in the config section. Typically this is your Micro-SD card, but it doesn't have to be. I personally send my games to a directory on my computer then copy them over by hand when I want to.

- Configuration

This button opens up the configuration screen which has only four options. Send path, language select, skin and reset key. I strongly suggest closing and re-opening the application after changing any settings. It seems to me that some of the settings do not apply until it is re-opened, though I am not known for my infallibility.

They EZ4 Client configuration screen.

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- Reset Key

This setting lets you pick which keys will initiate an in game reset for the GBA games. Since the EZV is L + Select + Start, it might be wise to choose the same for the GBA games. That said the default is A + B + L + UP, maybe for a reason?

- Bringing It All Together

This is how everything should work when you are using the application. When you first run it, you should configure it to set where you want to send the games, what theme you want to use, what language and the reset key combination. You should also make sure the *EZ4Patch.dll* is updated.

Now, using the Open button you navigate to your games and select the GBA file(s) you wish to patch. Opening a large game may take a moment or two, and in fact, the software itself may behave as if it is frozen, but wait it out and it should be okay. Now, click send and watch the progress bar go. The bigger the game, the longer it will take. As well as the size of the game, the destination's speed will also affect how long it takes. Writing to Micro-SD cards is also a bit slower than writing to hard drives.

Emulation

Many people enjoy playing older generation games as much/or more than current ones. There are many platforms that are emulated on the DS and/or GBA such as the Sega Master System, Sega Genesis, Nintendo Entertainment System, Super Nintendo Entertainment System and many others. Since the EZV is a Slot-1 solution, the emulators you find will need to be designed specifically for the DS, but if you have the 3-in-1 expansion you should also be able to use ones designed for the GBA. Some of them will read games from a directory on the Micro-SD card, some of them require that you append the games to the actual emulator application and some will happily do both. I am not going to cover this part in any more detail because the emulators are constantly getting better. Not only are there many platforms, but also many different emulators for each platform all of which are in different stages of compatibility with the games they are meant to play.

Applications

Besides games, you can use your DS for a few other things. If you would like to use your DS as a PDA, try DSOrganize. If you would like to run Linux, DSLinux is what you want. Another application that probably only 3% of you will find interesting is mythremote. This is just a small

taste of what you can find for the DS, but it should either get your interest started or persuade you to not even bother with any DS applications.

Tips & Tricks

There are a few things that can make using your EZV easier and reduce the problems you have with it. Some of them can help you recover from a problem and others help you avoid them and still others can help you make more or better use of your DS.

- Backup

This is one of the most important tips out there and it doesn't apply just to the EZV. Every so often, just pop your Micro-SD card in and grab any important data off of it. For me, this boils down to the */save/* directory of SAV files. Everything else is expendable in my case.

To make things even easier, you might consider keeping a backup of the entire card. That way, if you have to format it for some reason you won't need to figure out which games and applications you had on there.

- Hide files and folders

I like to keep a nice and neatly organized Micro-SD card. I keep my games in a folder named *Games*. I have the FlashMe tool stored in *FlashMe* and I also keep a few applications like DSOrganize and mythremote in a folder called *Apps*. I keep my emulators in a folder named *Emulators*. See a pattern?

Unfortunately, there are a few applications that expect to find a folder in the root of your Micro-SD card and when they show up in the shell, they are useless, ugly and annoying. For example DSOrganize expects to find a folder named *DSOrganize* on the card. Some of the emulators expect to find their games in folders named after the system, such as SNES, NES or SMS. Of course, the kernel updater *ez5updr.bin* and the folder *shell* expect to be in the root of your Micro-SD card. You can make your card look well organized and not full of junk by simply hiding the files and directories you don't want to see in the shell. Be sure to turn on the showing of hidden files and directories in Windows though, otherwise it'll look like they are gone!

To hide a file or folder, right click on it in Explorer and choose "properties" then look for the "Hidden" check box and check it. You

should also visit the “Tools” “Folder Options” menu item and then the “View” tab, scrolling down to “Hidden files and folders” and picking the “Show hidden files and folders” option.

- Download play

To me, this is one of the more interesting aspects of the DS. I honestly enjoy the fact that a large number of games don’t require all players to actually own the cart. The slot-1 carts like the EZV have a much higher success rate with download play games. A significant number of them work without any problems, but there are a few that don’t work. There are two methods I know of to overcome this problem: Use the FlashMe firmware on the DS(s) that you intend to send download play games to or use the FlashMe firmware on your DS and let your friend borrow your EZV cart. The reason FlashMe lets download play work in nearly all cases is that it bypasses the RSA encryption check done by the receiving DS.

You can find a list of games confirmed to work when sent to a clean DS at the DS Download Play Wiki Entry. Keep in mind it is a wiki so you can update the entry if you find a game that works, doesn’t work or has an incorrect status.

- DLDI

Unless you plan on only using your DS to play DS games, you will quickly run across DLDI. DLDI stands for **D**ynamically **L**inked **D**evice **I**nterface. In the past, homebrew developers had to write their applications to work on a specific Slot-1 or Slot-2 cartridge. The disadvantage of doing that was that they would have to rewrite the code for every different flash cart out there, but all that changed with DLDI. DLDI allowed the developer to write their program with generic commands for reading and writing, and the user is responsible for applying a DLDI patch to the *NDS* or *DS.GBA* file on their own. This DLDI patch is usually written by the maker of the Slot-1 or Slot-2 cartridge, but is sometimes developed by enthusiasts. For more information you can try the DLDI project or this DLDI information wiki entry.

There is one caveat to DLDI and the EZV. As well as applying the DLDI patch, some homebrew programs will need their header changed to “PASS”. This is not as complicated as it sounds as all you need to do is find cory1492’s program *DLDIFixV.exe* and you’ll be set. This program patches the game with DLDI and changes the header to PASS. Usage is very easy as all you have to do is just drag the file onto the *DLDIFixV.exe* and then magic happens. It will pop

up a command prompt telling you how things went and wait for you press a key so it can go away.

The command prompt that pops up after dragging homebrew onto DLDIFixV.exe

Troubleshooting

- Do my games need to be patched?

Most games should work without any extra effort. In theory, drag & drop should work all the time and yet in reality, this isn't always true. Some games seem to just work better patched and oddly enough some seem to only work un-patched and/or trimmed. For example, on my system New Super Mario Bros does not work when patched but is perfectly happy when only trimmed.

If you are using GBA games with the 3-in-1 expansion, they will have to be patched using the EZ4 Client. This is not optional.

- My games don't save!

Another problem which you might encounter is an incorrect save file size. Fixing this temporarily can be done by using L + X or L + Y to cycle through the save file types while you have a game highlighted. Fixing this permanently is as easy as updating your *ezsave.lst* file in the */shell/* directory on your Micro-SD card.

- Is my Micro-SD speed right?

If the speed setting is on "Auto" or is set too fast or slow, you might encounter some problems. If it is top slow, some games will load very slowly, stutter during movie playback or behave in other odd

ways. If it is set too fast it will also behave oddly, perhaps freezing at white/black screens or not loading at all. For me, Hotel Dusk on my slow Kingston Taiwanese 1GB Micro-SD looked like the main character was using LSD after the first few minutes of play. I was only able to fix this by finding a Japanese version of the card. In the Castlevania series of games, you might see stuttering and slowdown in the opening movie, but with my Taiwanese Micro-SD, Castlevania worked fine.

The solution to this is to increase or decrease the speed setting in small increments in the shell settings. Please remember that lower numbers are faster. If nothing works, you may simply have gotten "lucky" and your Micro-SD card just doesn't work. Aside from using the Hybrid Tool to patch the game, the only recourse seems to be cursing the gods and ponying up another $10 for a different one, but be sure to do some research first!

- Recommended Speed Settings for Micro-SDs

- Kingston (Japan) – 3 to 4
- Kingston (Taiwan) – 7 to 8
- PNY (Japan) – 3 to 4
- PNY (Taiwan) – 8
- A-DATA – 5 to 6
- Sandisk – 8 to 10
- Corsair – 4 to 5

- Micro-SD card's file system screwed-up

Occasionally, you might encounter problems that are narrowed down to your Micro-SD card having very weird issues. Symptoms while playing with the DS might include freezing at the "Initializing" stage while in the shell, or perhaps freezing on white screens after attempting to start the game. However, these issues may also be a speed related issue. In Windows Explorer, you might find that some files are listed as being much larger than the card itself. Files might be named unintelligibly, containing characters that can't be displayed.

In this case, you have basically two choices: format the card and start over or run a chkdsk and hope for the best. If you decide to format, you can use those backups of your save files you keep, right? To scan the card, use "**chkdsk x: /f /r /x**" replacing the "x:" with the letter for your drive of course. The "/f" staNDS for fix, the "/r" locates bad clusters and the "/x" forces the volume to be dismounted.

Formatting was mentioned earlier, but I will repeat the method here just for you: "**format X: /fs:fat32 /a:4096 /v:NAME /x**". If you

want the explanation of the command, scroll up. In my opinion, formatting is the safest way to go. If you scan the Micro-SD card, it will find the errors and move the bad file(s) away, which means you will need to replace the missing files. If it was a save file, the only issue is that of course now you've lost that save file. If it was a game, you'll need to figure out which game you are missing.

- Rumble for the 3-in-1 isn't working

Not all games support the rumble feature; you will need to investigate which specific games do. I can tell you that Elite Beat Agents is one that does, as that was the game I used to test for myself. It would also seem that when you start a rumble enabled game from the EZV shell, you should feel a very brief rumble when it starts it up. If you aren't paying attention, you will probably miss it.

Appendix

Just like the organ in the human body, this section may be useless by the time you read it. It is an attempt to document some of the important threads in the EZ-Flash forums for EZV users. Probably the most important single thread is lovingly maintained by Fumble, titled ALL YOU NEED FOR EZV, it literally contains everything you need, and is constantly updated. Another important thread maintained by windirt, who is part of the EZ-Flash team is called EZ5 software and simple manual and as the name implies, is a source of EZV software and a simple manual. The EZIV Section of the sosuke forums are where you can find the EZ4 Client and updated *EZ4Patch.dll* file.

Credits

This document would not be possible without the existence of vast amounts of information already documented by numerous people. All the authors contributing to the wiki, the original EZ5 manual, posters on forums and people talking in IRC all need to be given their credit and thanked.