

# CTRPluginFramework - User Manual



## Warning

As anyone should know, using something that alters the data of a game can potentially lead to a corrupted save game.

While the devs that releases the plugins do their best to avoid that, it's still a risk and you should take precaution in case it happens.

So, you should use a save manager (like the excellent JKSM: <https://github.com/J-D-K/JKSM/releases>) to backup your saves before using a plugin.

(Or also svdt: <https://github.com/meladroit/svdt/releases> as a 3dsx alternative)

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## Main Menu

To enter the menu of the plugin press Select (default hotkey) in game. Once you do, a menu resembling of this will be displayed:



On the upper screen, you can see the cheats available for this game while you'll have some options on the bottom screen.

## The cheat menu

You can navigate in the cheats list with the following controls:

<b>DPAD / Stick</b>	Navigate in the menu
<b>A</b>	Open a folder or Enable / Disable a cheat

If you see that icon  on the bottom screen, it means that the currently selected folder / cheats possess a note that can give valuable information.

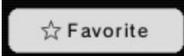
Touch that button to display the note and touch it again to close the note.



## Favorites

CTRPF allows you to place some cheats and folders in a favorites list. A sort of quick access to your preferred cheats.

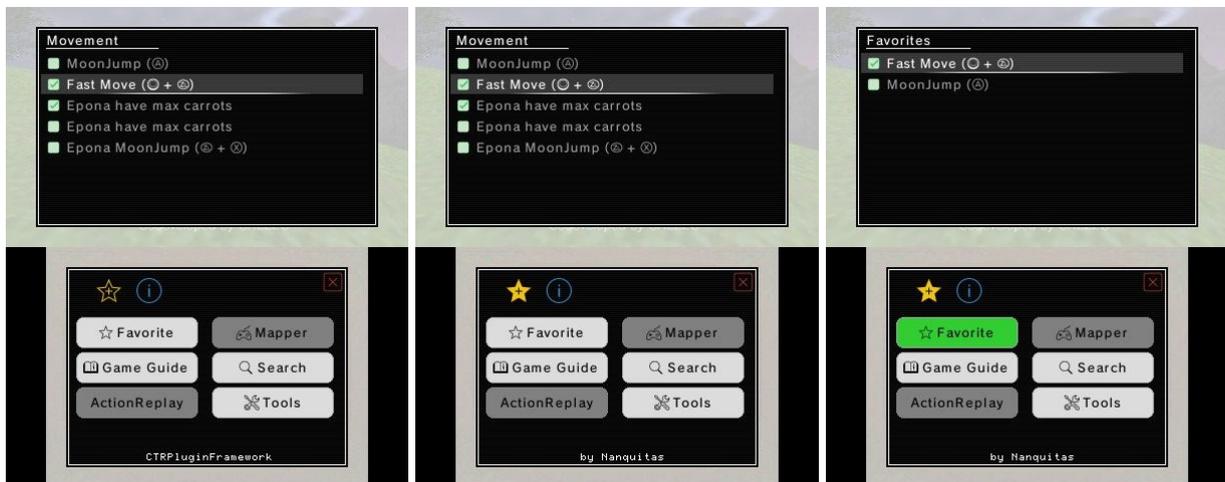
To do so, select the folder / cheat that you want to put in the favorites list and touch the following icon on the bottom screen: .

From now on, the selected folder / cheat can be accessed in the favorites list by entering the favorites mode. You can enter the favorites mode by touching this button on the bottom screen: 

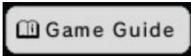
which should now be green .

Touching this button again will exit the favorites mode.

When a folder / cheat is put in the favorites list, the star icon will look like this: . Touching this icon will remove the selected folder / cheat from the favorites list.



## Game Guide

On the bottom screen of the main menu, you can find a button . This button, allows you to display a guide for the game on the form of .txt files.

### How does it work ?

CTRPF will list all folder and files that are present on the Guide folder of the current folder.

Example for the game Zelda Ocarina Of Time 3D:

- The title id of Zelda OOT 3D EUR is 000400000033600, so the plugin will be located inside the folder: SD:/plugin/000400000033600/
- From here I create a folder Guide, so SD:/plugin/000400000033600/Guide/ and I put all my guide's files inside this folder.

The Game Guide will list all folders and .txt files inside the Guide folder, so you can dissect the step between folders. The Game Guide supports foreign language and special characters but the file must be saved with utf8 encoding.

Additionally, the Game Guide supports loading 24-bits bmp picture files.

The pictures files loaded will be from the current folder.

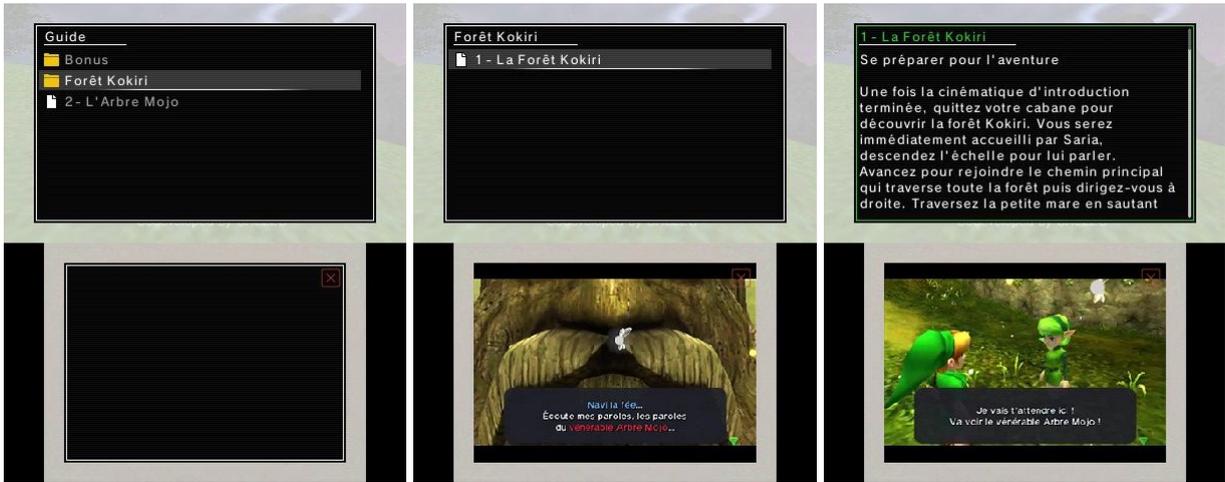
Example with the following folder tree:

```
SD:/plugin/000400000033600/  
Guide/  
  Bonus/  
    Épée Biggoron.txt  
    Pierres à potin.txt  
  Forêt Kokiri/  
    1- La Forêt Kokiri.txt  
    1.bmp  
    2.bmp  
    2- L'Arbre Mojo.txt
```

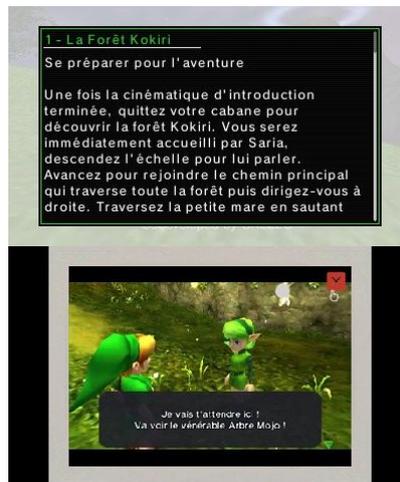
1.bmp and 2.bmp will only be visible when I open the folder **Forêt Kokiri**.

The recommended size for the bmp is 280px\*200px, but the framework will try to adjust the bmp. However, the bmp can't be too big and it's not recommended that the dimensions are bigger than 400\*240.

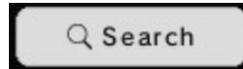
You can navigate inside the pictures list by pressing L / R or swiping to the left / right on the touch screen.



To exit the Game Guide, you can touch the close button on the right top corner of the touchscreen.



## Search



The next function we'll see is under the button:

Behind this button you'll find a searcher that will help you find and create cheats for your games.

The use of a searcher is pretty generic, so I won't do a full tutorial but I'll explain how to set your parameters for your search, as well as the few options that it currently has.

### Set the search parameters

The first thing you'll see is this:



On this window, all the bottom screen's controls are touch controls, so touch them to change their value.

**MemRegion:** Where to search in the memory

**Start / Stop:** The range of addresses to search

**Value type:** Select the type of the value to search

**Search type:** The type of search you want to conduct

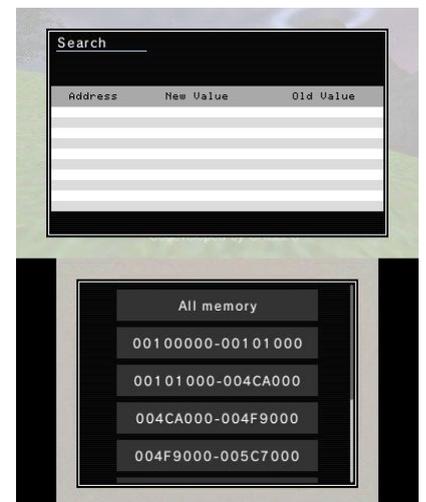
**Scan type:** The condition for the address to be considered a match

**Alignment:** The alignment of the addresses to search

**Value:** The value to search

So, unless you have an idea where the value you're searching for is, you'll want to use 'All Memory'.

However, if you want to specify a range, you first need to select a memory region. To be able to change the address in Start and Stop, Start and Stop must be in the selected region.



**Search Type** gives you two choices:

1. Specified value
2. Unknown value

Specified value, is when you know the value that you're searching for while, you don't know the value for an unknown search. There's a huge difference since the unknown search will basically do a dump of all the addresses and will be slower.

**Scan type** allows you to select the comparison condition that you want to use for the search.

The meaning is different according to the Search Type selected so here's a detailed listing:

### 1. Specified value

- **Equal to** - If the address's value is equal to the value you've entered, it's considered a match
- **Not equal to** - If the address's value is different to the value you've entered, it's considered a match
- **Bigger than** - If the address's value is bigger than the value you've entered, it's considered a match
- **Bigger or equal** - If the address's value is bigger than or equal to the value you've entered, it's considered a match
- **Smaller than** - If the address's value is smaller than the value you've entered, it's considered a match
- **Smaller or equal** - If the address's value is smaller than or equal to the value you've entered, it's considered a match

### 2. Unknown value

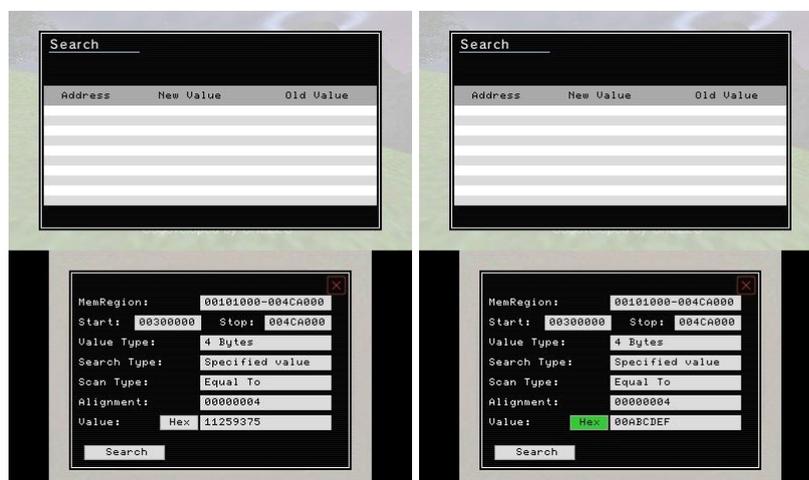
- **Equal to** - If the address's value is equal to the last search's value, it's considered a match
- **Not equal to** - If the address's value is different to the last search's value, it's considered a match
- **Bigger than** - If the address's value is bigger than the last search's value, it's considered a match
- **Bigger or equal** - If the address's value is bigger than or equal the last search's value, it's considered a match
- **Smaller than** - If the address's value is smaller than the last search's value, it's considered a match
- **Smaller or equal** - If the address's value is smaller than or equal to the last search's value, it's considered a match

**Value** is the value to search or compare with.

### Tip:

You can find a button **Hex** next to the value's textbox. This controls the input type of the keyboard, if you want to enter a decimal value leave it disabled. However, if you want to enter a hexadecimal value, touch it to enable the hexadecimal mode.

This button also controls the input type of the Edit option in the search results.



## Start the search

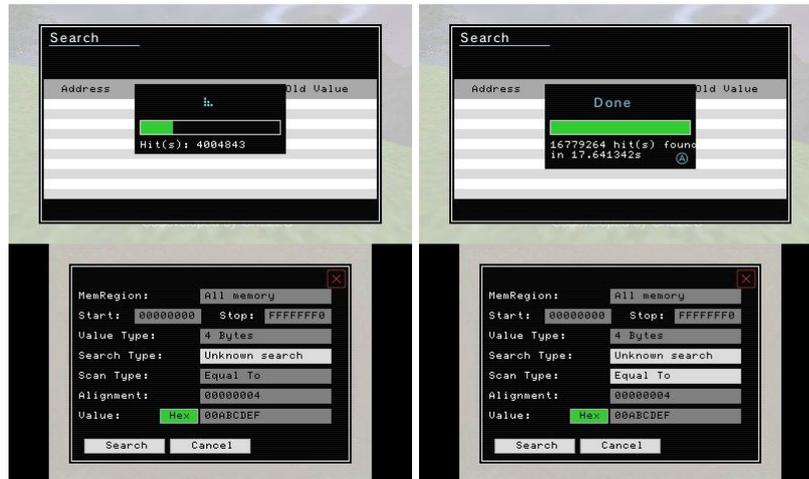
When your parameters are set press the button Search to start the search.

A progress bar will appear, you just have to wait until it's completed and the result window is displayed.

When the result window appear press A to access to your results list.

### Tip:

You can cancel an ongoing search by pressing the button Cancel.



## The results

Once the search is done, you'll have access to your search results. You can navigate through the list with the following controls:

Up / Down	Move the selector
Left / Right	Subtract / Add 100 to the selector
X	Open the Options submenu



## Options

If you press X on the search results, you'll trigger the Options submenu.

This menu gives you access to those actions:

- Edit
- Jump in editor
- New cheat
- Export
- Export all



## Edit

With Edit, you'll be able to directly edit the value of the selected address in the results list.

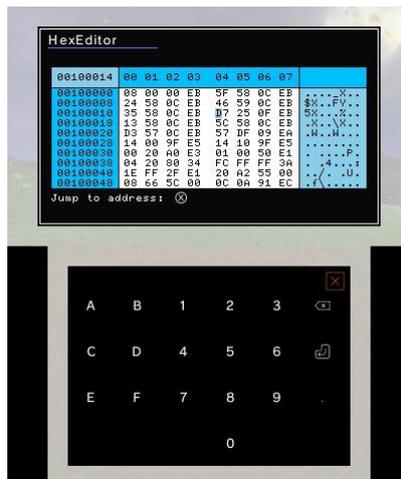
So select Edit, and press A to display a keyboard that will allow you to edit the value.

Press B to cancel the edit and press the enter key (  ) to validate your input and edit the address's value.



## Jump in Editor

Jump in editor will open the HexEditor at the address selected



## New cheat

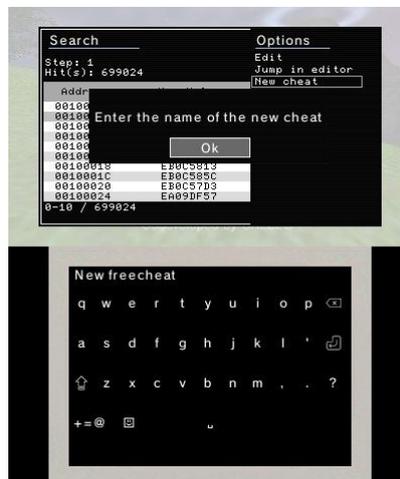
With the New cheat option, you'll be able to create a new free cheat from the selected address to be able to freeze / lock a value afterward.

The cheat once created will be accessible from Tools/Free Cheats.

To create a new cheat, press A on the New cheat option and press A again when a message box asking for a name appear on the screen.

A keyboard will appear, you enter the name of the new cheat and you press the Enter key when you're done.

And that's it. From now, you can go in Tools -> Free Cheats to configure / enable the new cheat.



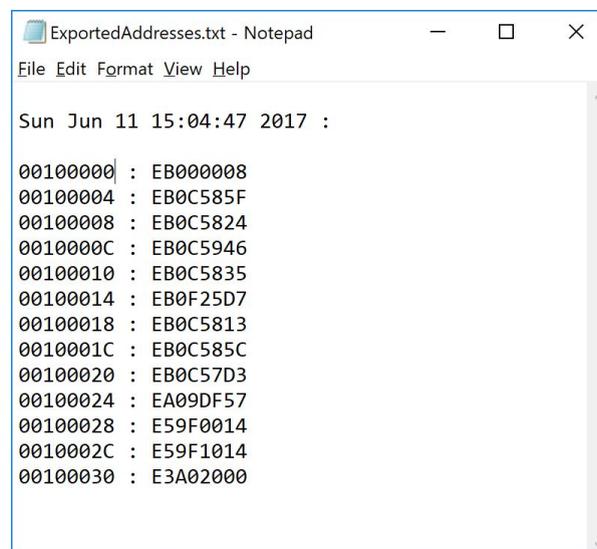
## Export

Export will create a new text document on the plugin's folder named ExportedAddresses.txt.

Then, it'll export the select address inside this text file, so you can keep track of the address that seems interesting for you.

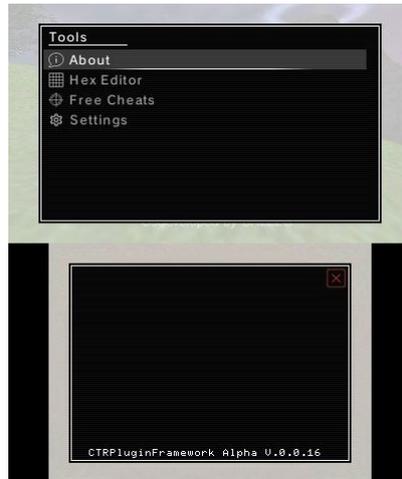
## Export All

Export All does the same thing as Export, except that it will export all the addresses that are currently visible on the results list.



## Tools

In the home menu, you can find a button , this button hides some options which can enhance the experience with CTRPF.



### About

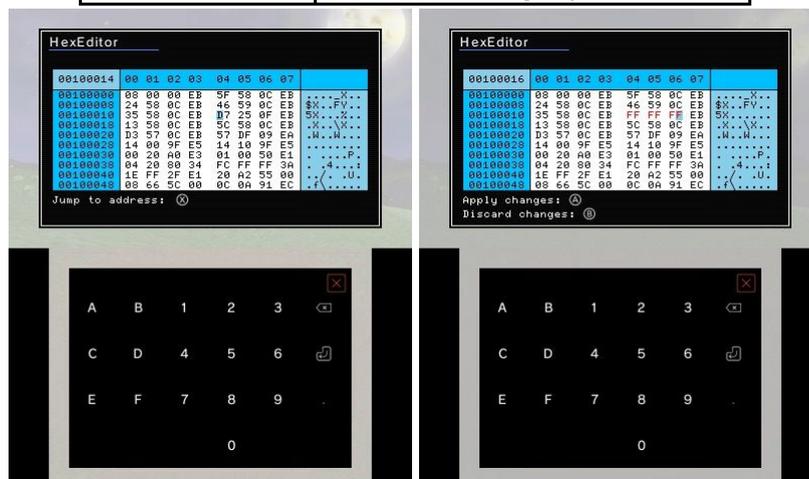
About will give you information filled by the dev of the plugin. Since it's completely up to the dev to write something in it, this guide can't tell you what it'll be, but you should take a peek at it for every plugin you'll use since it can help you to use the plugin correctly.

### HexEditor

The HexEditor is a basic hex editor like you can find on every platform, except that this one will allow you to edit the memory of the current process, in real time so.

Here's the controls to navigate in it:

DPAD	Move the cursor
Stick Up / Down	Scroll the address
X	Jump to an address
A	Apply the changes you've made
B	Cancel the changes you've made



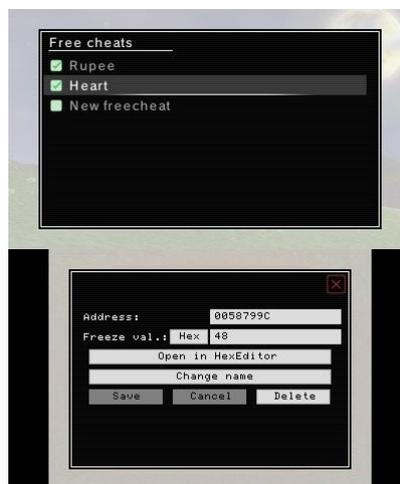
## Free cheats

The free cheats are a selection of cheats that you can create directly with the plugin, using the Searcher (See Search Option, New cheat for more details).

Those cheats when enabled allows you to freeze a value to the address.

The bottom screen will give you some options to edit your cheats, here's a resume of them

- **Address:** the address targeted by the cheat, you can change it by touching the box
- **Value:** the value that will be forced to the address when the cheat is enabled, touch the box to change it
- **Open in HexEditor:** will open the HexEditor directly on the address targeted by the cheat
- **Change name:** touch this button to change the name of the cheat (don't forget to save your changes)
- **Save:** save your changes if you've modified anything (address, value, name)
- **Cancel:** cancel the changes you've made
- **Delete:** delete the cheat



## Settings

Inside settings you'll be able to change some options of the framework.

Change menu hotkeys	See below
Auto save enabled cheats	When enabled, CTRPF will save all the enabled cheats to CTRPFData.bin
Auto save favorites	When enabled, CTRPF will save all the entry that you put in your favorites list
Auto load enabled cheats	When enabled, CTRPF will automatically load the saved cheats when it'll boots
Auto load favorites	When enabled, CTRPF will automatically load the saved favorites when it'll boots
Load enabled cheats now	Press A to load manually the saved cheats
Load favorites now	Press A to load manually the saved favorites

## Change menu hotkeys

With this, you'll be able to define the keys you want to open / close the menu of CTRPF.

To do so, just check the key you want to use.

The change is immediate and you can touch the Close button to exit the Hotkeys Modifier.



## Others

### Customizing background

CTRPF allows you to customize your backgrounds simply by putting the .bmp of the image you want to use inside the plugin's folder.

The files must be named **TopBackground.bmp** and **BottomBackground.bmp** for the respective screens.

The recommended sizes for the pictures are:

- Top screen: 340px \* 200px
- Bottom screen: 280px \* 200px

### **Note**

On some games (especially on O3DS), the background might not be loaded if there's not enough memory available for CTRPF. In that case, the framework will choose to avoid loading the backgrounds to reduce the memory needed.



(Thanks to MegaMew for this screenshot)

## Thanks

This framework couldn't have been done without a lot of people so a big thanks to them !  
The names here are in no particular order.

- **AnalogMan:** Alpha Tester
- **Anto726:** Alpha Tester
- **Cell9:** NTR CFW which I took some ideas from
- **MegaMew:** Alpha Tester
- **Nanquitas:** Developer of CTRPluginFramework
- **PabloMK7:** Alpha Tester
- **Rydog:** Alpha Tester
- **Slattz:** Alpha Tester
- **Project CPP3DS:** which I read the code as a base since CTRPF is my first try at c++
- **Guys on StackOverflow:** I learned a lot by reading random posts there
- **Ctrulib and all the guys that contributed to it:** Just for being here and awesome