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Xenogears

Translation tools
version 1.1

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1 - INTRODUCTION

Hello everybody, and thanks for downloading our translation tools. Inside this package, you'll find everything you need to translate Xenogears into your language, but first, I'd like to tell you about the story of our translation. The "real beginning" of our project is to be found in late 2002, when _Ombra_ and Graph (the latter a great Italian hacker who is not member

of our group) started writing the source code for the first ISO dearchiver, so that we could dump and study Xenogears files, since, as many of you may have noticed, there are only two visible files, while all the others are hidden. Right after managing to dump them, Graph left the project. However, _Ombra_ decided to carry it on and asked for Chop's help, who created (after figuring out the compression Square used for this game) Xenolater, the main script editor. The following year, Chop also programmed Xenomap, a tool for remapping and translating all of the textual graphics. Last, but obviously not least, he eventually programmed Xpc (XenoPatchCreator) and Xenopatcher, used for making the "effective" patch.

By means of these tools, translating this wonderful game was a long, but sufficiently easy work. Now, two years after the 1.0 release of our patch, we decided to make them available online, in order to allow everyone to translate this game into other languages, or, why not, to edit the English version (to put back original names and translate it from Japanese, etc). We do hope to see many other translation projects, for new translations will make even more people know this masterpiece. That's why we spent so much time working on it and translating it... 'cause we love it. ;)

2 - FILE EXTRACTION AND REINSERTION (Extract, Xenostudio, XenoIns and Xenoiso)

First of all, make sure you have at least 3GB free on your Hard Disk. Then, you need to make two BIN (or IMG, it doesn't matter) images (one for each CD) of your Xenogears discs and save them in the same folder as **extract.exe** and **xenoins**.¹ If your discs are genuine, CD1 size will be 718.738.272 bytes, and CD2 will be 688.700.880 bytes.

Now it's show time! In order to dump all the game files (and they're A LOT... and all of them, excluding the executable, are hidden), just execute **extract.exe** (if you want to dump the Japanese files, use **extractj.exe**). The program will ask to input the name of your iso file, and then it will start dumping. CD1 files will be placed in STRIPCD1, CD2 in STRIPCD2.
Note that .str files (movies) won't be dumped correctly. it's a small bug we didn't fix, since it's possible to use programs like PSmplay or any other which allows a str2avi conversion.

Reinsertion

Now you're ready to work! However, before explaining how to translate, let's see how to reinsert edited/translated files. :) You can do it by using three different programs: Xenostudio, XenoIns and Xenoiso. Each of them has its own features.

Xenostudio: Originally, it was to be a global editor, but the idea was later dropped. The version included in this package can be used to extract and replace single files. Just open your iso, look for the file(s) you need, right-click and then choose "Insert" or another option.

¹ The process of making an ISO file won't be explained in this user's guide, since there are hundreds of tutorials on the Internet about this easy operation.

Note: files ext1.dat and ext2.dat **MUST** be in the same folder as your CDs images. You can edit those files by renaming them to .txt and changing file/folder names and extensions. That's all.

Xenoins: I recommend to use it if you have to insert a **single** file (otherwise, use Xenoiso), since this tool works very quickly.

In order to use it, just choose your iso (if you're inserting into CD2 a file extracted from CD1, mark the "Fix Cd2" option), choose your file and put in the "Position" box the number of the file you want to reinsert.

For instance, if you need to insert file 0589.unk8, just write 589.

If the edited file is too big (i.e. when it overflows the number of CD sectors needed by the original file), the program will show an error message. If this happens, just use Xenoiso.

Xenoiso: THIS TOOL ROCKS. Why? Because it can insert as many files as you want, and it also recreates a Xenogears iso FROM SCRATCH... and that means you won't have any size issue (that's why you have to use this if you supersize a file of yours). The only cons are that it's quite slow (but that's obvious, it has to write 700MB), it can't insert str files (movie files; to do it, check **section 6**) and it's a bit hard to use the first time. So, let's see how to make this baby work. **IMPORTANT: this is a command line tool, if you don't know how to operate with a DOS like environment (such as Windows CMD window), use Google to find a tutorial.**

Before executing it, you'll have to create a txt file (example: "list.txt"), which is structured this way:

```
[cd1|cd2|cd2fix]
original_iso
edited_iso
file1_number,file1_name
file2_number,file2_name
...
...
```

The first line changes according to which CD you're working on. **cd2fix** is a special option that **MUST** be used if you want to insert into CD2 files originally dumped from CD1. The reason is simple: **CD2 has 5 movies less than CD1**; hence, the same file on CD2 has a different number! For example, file 0606 becomes 0601... simple, isn't it? So, cd2fix will insert every file only after subtracting 5 to its position. Very useful, since I assume you don't want to rename hundreds of files. :P

The second line is the name of the original iso, the third one the name of the iso that will be made by the program.

The following lines contains the number and the name of the file(s) you're going to replace.

Now for a practical example:

```
cd1
xenol.bin
xenop.bin
616,0616p.tim
```

It means: working on cd1, original iso name is xenol.bin, the new iso will be named xenop.bin; file number 616, whose name is 0616p.tim, will be replaced.

Not too difficult, if I might say. :)

But there's more... Xenoiso has another useful option: the insertion of ALL the files which are INSIDE a directory of your choice.

This is particularly nifty if you have hundreds of files to be replaced. In order to use this option, you just have to **insert -1,(path)** instead of file number and name. Example:

```
cd1
xenol.bin
xenop.bin
-1,c:\romhack\xeno\dir
```

That means Xenoiso will reinsert all of the files placed inside c:\romhack\xeno\dir. If you want, you can use "shortcuts" such as .\ (for example, I had the folder "files" inside Xenoiso directory, so I just wrote -1,.\files ;)).

IMPORTANT: if you plan on using this mode, the program will obtain the file positions by reading the numbers contained in their own names. So, DON'T RENAME any file if you want to use this mode. There is no problem with extensions (file 0606.dat, for example, is ok), but if Xenoiso finds a file with letters in its name, it will give problems (for instance, la120.txt would be placed as file no. 1).

In order to use the list and execute Xenoiso, simply launch (via DOS/CMD line, or a bat file) **xenoiso (name_of_your_list) -d** (-d is optional, if you activate it, a log file will be created).

3 - HOW TO TRANSLATE: FIELD SCRIPT (Xenolater)

Did you think this was the hardest part? If you did, you're totally wrong. :P Thanks to Xenolater, translating the main script will be a piece of cake.

First of all, you have to find the right files. All of the field script is located inside the 11th folder. The even files of this folder are "the rooms" (each room is a different place of the game, a house, a single room, the streets of a town, etc.), while the odd ones contain sprites and other graphics.²

All you have to do is to execute Xenolater, then File -> Open, and you'll see the script of that room. You can save it with File -> Save Dump. However, this is useless since we put in this package a folder, named \en_script, which has all of the English dumps in it.

Now for the text reinsertion process. Before doing it, **you should edit the game font**, so that you can use all the special characters your language needs. Jump to **Section 5** to find out how to.

² **NOTE:** the odd/even distinction is of use when working on a CD1 dump, when working on CD2 it is the opposite (odd files are the rooms, and even files contain graphics).

After editing it, you have to prepare your own table file,³ according to your new font. If made your font by editing ours, you can take **xenolater.tbl** (placed in the **\tables** folder) and edit it easily.

After finishing, open Xenolater, then choose your table (use the Table button).

Another important thing is to activate the **Auto Count**, so that Xenolater can resize the dialogue windows (fantastic, isn't it? You won't have to worry about the size of the dialogue boxes!).

Now you're ready to put back the translated script. :)

Here it is a small guide about the format used by Xenolater (text block taken from file 774):

```
<TextBlock 26 w:44 h:4>
Citan
"Well...<Delay 10>
It has been 5 years
since I last fought...<New>
I hope I can still
remember..."<Close><End of Block>
```

So, those tags mean...

"This is the '26th' text block in the file, there is a delay of 10 frames before 'It has...'; there is a new window after "fought" and this blocks ends after 'remember...'."

In a nutshell, here is a mostly complete list of the tags used by Xenolater:

<Textblock X w:X h:X> shows block number and how big is the window used by that dialogue (as always, w=width and h=height).

<Delay X> means there is a 'delay' of X frames (30 frames are about 1 second in the NTSC system) before showing the following words.

<New> means that, after pressing the Cross button (Circle in the Japanese version or with the hacked American one, see **section 8**), the window will be cleaned so that new words may be shown.

<Close> means the dialogue is over.⁴

<Opcode X XX> are special tags we didn't figure how they worked when Chop programmed Xenolater. However, we found later that **<Opcode 1 XX>** is a sort of accelerator (the opposite of **<Delay X>**), while **<Opcode 4 20>** is used by the game to load an item name from its kernel. **<Opcode 2 XX>** means 'close this window after X frames'.

<UNKNOWN CHUNK X> it's a character not supported by our text dumper (usually a Japanese ideogram left in debug rooms).

³A table file is a txt file which indicates the hexadecimal value of each character present in the game font. It's one of the most basic concepts of game hacking, if you didn't know what a table is, you probably are not ready to use these tools, you should study some tutorials and try experimenting with hex data.

⁴NOTE: The last dialogue of a file usually has 2 **<Close>** tags instead of one. The reason is unknown to us.

<Name> shows a name that can be edit by the player (ex. **<Chu-Chu>**, or the Gears).

<PersoX> makes the game load the name from PSX RAM of the 1st/2nd/3rd member present in your current party.

<Citan2> and **<Emeralda2>** mean "Citan with the katana" and "adult Emeralda". When a file has 2 copies of Citan and Emeralda's text, it means one is used by the "normal" and the other by the "different" character.

Also, there is a special tag (**<Space X>**) which doesn't exist in the original script, but that can be used to make windows bigger than the actual text needs. Use this if you're dealing with "variable names/numbers" (such as **<PersoX>**, **price variables** and so on). Since those special values are not considered letters, Xenolater will ignore them when resizing windows (thus, they'll be too small). By using **<Space X>** the program will resize them as if there were X characters more.

After translating a file, you're ready to put it back. :)

Take your translated script, **select all the text** (usually CTRL+A), **copy it** (CTRL+C) and then **past it** (CTRL+V) inside Xenolater's window, and then save it (CTRL+S or File -> Save).

Congratulations, you're now ready to test your translation! ;)

Follow the instructions in Section 2 to reinsert your translated files.

NOTE 1: There are a bunch of windows which can't be resized (more or less just 10 in the whole game). To resize them, one needs to hack the room in a specific way.⁵ After hacking them, Xenolater will be able to resize even those windows.

You'll find those hacked files inside **\it_stuff\field** folder.

Just paste your translated text into our Italian files.

Inside the folder \it_stuff\field\special you'll find two more files. Check readme.txt to see when you have to use them.

NOTE 2: Even if Xenolater resizes all of the windows, that doesn't mean you have unlimited space for your text.

If you're translating a dialogue box with an avatar (such as Fei's dialogues), you can use up to **28 characters** for each line, and if you write more than 4 lines, the text will "scroll". We suggest to put **<New>** and start a new window to avoid this problem.

If you're translating a NPC dialogue, you have much more space. Xenolater will warn you if you exceed the size limit (but be careful: **some special dialogues are meant to have scrolling windows and hold loads of lines!** In that case, ignore the error message(s) Xenolater will produce).

NOTE 3: When translating, remember that you **can't** move the "choice arrow" unless after doing a very difficult hack. So, if the choice arrow is placed, for example, on the 3rd and 4th lines, you **can't** add a new line in that window, because the arrow would remain on the original lines.

So, when dealing with these dialogues, try not to add new lines.

⁵A room file is actually made up of several subfiles, and one of them controls all the events and these weird windows.

NOTE 4: Inside the package (folder \docs) you'll find "stanze_xeno.txt". Inside this file there is a complete list of all the rooms and their description... only problem is that it's all in Italian (except some names, left most of the zones in English). :) If need be, try using an online translator, I guess it should work well enough.

4 - HOW TO TRANSLATE: MENUS, WORLD MAPS & MORE (Xenocomp, Xenopack and ExtXeno)

Menus:

After dealing with the field script, let's move on with menus and other texts (such as world maps and something more). Differently from what happens with the field script and Xenolater, menus have not a "specific" tool that can handle their text... the reason is simple: most of them (after being dearchived, that's what Xenocomp, Xenopack and ExtXeno do), are "normal", header-less (well, actually they have a 4 bytes header, but you MUST NOT change it) files which begin with a bank of absolute pointers (it means: even if they have a 4 bytes header, **you must not subtract 4 from the offset**) and have the text just after them.

The only exception is the battle script (along with file 0047). In order to edit it properly, you need to use Xenolater. However, menus are much simpler, and it's better to edit them with a "normal" Hex editor (such as Translhextion or ThingyV). But let us proceed with the explanation.

First, let's analyze a menu file. Take file number 2593.unk8 (folder 14), which contains both graphics and text. Execute xenopack with command line, you'll see a short list of its commands: **xenopack -u** unpacks an archive, while **xenopack -p** packs it. Let's try the command "xenopack -u 2593.unk8". :)

7 new files will be created; actually, they were inside file 2593, just compressed and archived. ;)

After editing them (text is inside file3), delete the original 2593 (not necessary, if you leave it, it'll be overwritten), and write xenopack -p 2593.unk8: a new file will be created, ready to be inserted into the ISO.

That's what xenopack does: it *hacks* and *creates* archives.

But there is another type of archive which can't be opened by xenopack. Let's see how to open it, then.

We will use this time xenocomp and ExtXeno.

Xenocomp is, as the name suggest, a tool that compresses and decompresses a Xenogears compressed file. You'll find **single compressed files, archives of compressed files and compressed archives**. We're about to work on a compressed archive.

Take file 0029 from folder 1. It contains every item and equipment of the game, and much more.

Since it's compressed, use xenocomp first (as for xenopack, if you just execute it you'll see two possible commands: **-d file1 file2**, which decompresses file 1 into file2, and **-c file2 file1**, which compresses file1 into file2. Obviously, you can change file1/2 to whatever you prefer). So,

write **xenocomp -d 0029 0029.dec** (if you don't like the .dec extension, just change it :P).

Now we need to dearchive it. Using ExtXeno, of course.

To split an archive, type **extxeno -e name_of_the_archive**, so let's write **extxeno -e 0029.dec** (if your decompressed file has another name, just use that one instead of 0029.dec).

53 files will be created (quite a lot, I know :P), ready to be translated and their pointers edited. To recreate the archive, type **extxeno -c 0029.dec *.xen** (ALWAYS use *.xen).

IMPORTANT: There is a thing that this tool doesn't do: to check whether the new file is a multiple of 4 or not. We found only later that THIS TYPE OF ARCHIVE NEEDS TO HAVE A SIZE MULTIPLE OF 4, OTHERWISE THE GAME WILL CRASH ON A REAL PSX OR ON PSP (ePSXe just ignores the bug). If you have a file which is not a multiple of 4, PAD IT WITH SOME BLANK BYTES (\$00). It's not difficult, just be careful when dealing with this sort of archive.

Now the last operation: we have to compress it with xenocomp.

Type **xenocomp -c 0029.dec 0029**. You're now ready to insert it. :)

NOTE: Only file 0029, the World Maps, and file 0047 (which contains Battle Arena text) have this format. To know where the world maps are, check **section 10**. You can't use more than 16 bytes/letters per location.

SEE SECTION 10 FOR A COMPLETE LIST OF IMPORTANT FILES THAT CAN BE EDITED VIA THESE TOOLS.

NOTE 2: Remember:

1. When I say "compressed file", de/compress them with Xenocomp.
2. When I say "archive of compressed files", use Xenopack.
3. When I say "compressed archive", use Xenocomp+ExtXeno.

Battle Script:

As for the battle scripts, there is not much to say. They're inside file 3088 (folder 19), which is an archive made up of compressed files (that means you have to use xenopack). After unpacking them, you have to use **Xenolater** to open its subfiles. Execute the program, then File -> Open Dump. To save it, just use File -> Save Dump. The script format is the same used by the main script. Nothing more.

Battle Arena text:

The next files we'll speak about are file 0035 (which contains Battle Arena menus) and 0047 (other texts used by the Battling minigame), both inside folder 2.

0035 is a single compressed file (just use xenocomp). After decompressing, open it with an ASCII table. You'll see there are many words scattered in the file. When translating it, remember not to use lower case letters or special (such as è, à, ç etc) characters, which do not exist in the font. Without an ASM hack, there is no way to use them since the font, which is inside file 0049, has no free room available for adding them.

Furthermore, when translating Xenogears we didn't manage to find the pointers to these words. Maybe, Square used RAM pointers, a type of pointer we discovered when translating Vagrant Story, which uses them MASSIVELY. To find their value, one has to dump PSX RAM when the game is showing those words; then look for them inside the RAM, take the last 4 bytes of their offset and switch the 2 couples. **Anyway, that's how Vagrant Story works. Probably, Xenogears is not in the same way. But, if you feel like expanding it, give it a try.** Please let us know on our forum, if you do find them!

Anyway, there are many blank bytes that you can use for expansion... and even if you shorten some words, it won't be a tragedy, since it's just a minigame.

File 47 is much simpler. Use xenocomp and ExtXeno, you can edit the second subfile with Xenolater's Open/Save Dump function.

Remember: its size must be a multiple of 4, or the game will crash on real hardware (or when emulated on PSP).

Monster names and techs:

Aw, that will be boring. At least, it was so for us. Monster names are stored along with their stats (we didn't study the stats format, sorry), and they're contained inside a different, but easy, archive format.

The only annoying thing is that those names are not contained in a single archive, but they're scattered in dozens of different files.

Open **folder 16**: (almost) all the extension-less files contain them.

Now, let's see how to dump them properly. For this example, I'll use file **2670** (no special reason, I chose it randomly :P).

After opening it with an hex editor, go to 0x30. In this case, we have the value **C20E**. Since we know that the Playstation has got a little-endian processor (you knew that, didn't you? :P),⁶ we have to switch the 2 couples of bytes: it means that C20E becomes **0EC2**, and, after removing the useless 0, we have **0xEC2**, that is the starting offset of the subfile we are looking for. Go to there. Then, just copy all the data from there to the end of the file, and past it into a new file. You can now work on that text (pointers are, as almost always in Xenogears, absolute ones).

After finishing, just past the new data into the original file. Since you're working on the last file of the archive, you won't need to alter anything else.

Then, reinsert via XenoIns or XenoIso. The format is the same for all the files.

NOTE: You can't use more than **13** letters per name and **28** per tech.

Chapter names:

Lastly, we have to deal with chapter names (file **2605**, **folder 14**) and some minor editing.

Translating them will be a bit annoying too, for several reasons. First, they use the PSX Bios internal font, **so you can't use any special character**; **secondly, you're limited to 15 characters per line (and you can't even use less than 15 characters. So, if you have less than 15 characters, pad the**

⁶ If you don't know what endianness is, try reading the interesting Wikipedia page about this argument: <http://en.wikipedia.org/wiki/Endianness>

line with spaces until you get 15 characters); lastly, they are stored with SJIS, a 16 bit encoding table, which is included in this package, check the \table folder, it was named **savexeno.tbl**.

To translate this file, I suggest to use Translhextion (but no one prevents you from using another hex editor which supports 16 bit tables).

If you want, you can also change the line XENOGEARS NO. that appears when browsing the Memory Card from the PSX bios "save" menu. This line is stored in the following files (actually, they're the same file; so, edit one and copy & paste): **2597, 2599, 2603, 3957.**⁷

Miscellanea

Main character names: Should you want to edit them (for example, to restore Citan's original name, Shitan), you have to open file **2595 (folder 14)** with a Xenogears standard table (or the one you're using with Xenolater). You'll see that the names are coded with a 16bit table. Edit them via hex editor. **You can't have more than 10 letters per name (so, sadly, it's impossible to restore the El- prefix before Omnidgears' names without an ASM hack).**

"Special" menu text: If you open our \table folder, you'll notice two particular tables: **xenograph.tbl** and **xenograph2.tbl**.

They are used by a bunch of words written with that grey font that appears in the character stats screen (open the game menu, go in Status and look for the words Attack, Defence, etc.).

You can easily edit this font, adding new characters and DTE/MTE (there are hundreds of ideograms left that can be replaced) via remapping (see **the following section**).

Anyway, these are the files that need this table (**IMPORTANT:** there is at least one more we didn't need to edit, which controls the words TOTAL, Exp, T. Exp, Level Up, HPMax, MPMax shown after battles. If you need to edit some of them, first try to do it by mapping, otherwise look at a RAM dump with those two tables, and try to locate them into the iso. After working on the game, you'll become much more familiar with the game internal structure, and it shouldn't be too hard to locate those words):

File 0038: It's the battle executable. Inside it you'll find the words TOTAL, Exp, T. Exp, Level Up, HPMax, MPMax shown when a character levels up. Use **xenograph1.tbl** to edit them (go to 0x53778 to find them).

File 2602: Contains some words that appear when using a Gear shop (such as FUEL, WEIGHT, etc). Use **xenograph1.tbl** to edit them. You can add and use your own characters after editing the font.

Files 2597, 2599, 2603, 3957 (the latter is the only **compressed**): as I said before, they're the same file, the main menu executable, just copied over and over. They contain the words Next LV, Exp, FL, HP, MP and something else. Use **xenograph2.tbl** to edit them. What's the point of using a 32bit table, you're asking? Hell if we know! :D

NOTE: The words not listed in this section (such as Attack, Defence and all those things in the Status and Gears menus) are not written with a table, they're mapped graphics. See the following section.

⁷This one is the only **compressed**. It's used when the player is on the world map.

5 - HOW TO TRANSLATE: GRAPHICS (Xenomaps and more)

Ah, this will be a long, long explanation. :P
Hacking the graphics will require a lot of time and efforts: that's why we suggest you to work **first** on the graphics, and **then** on the script.

Font editing:

If you are going to translate the game into your language, you'll surely need to add some diacritical characters (unless you're translating it into Latin, lol ;P). So, let's see how to do it. By the way, if you're translating the game into French, Spanish, Portuguese or some other language which uses many special characters, you'll probably find it easier to edit our font and just add the special letters you need. It's inside folder **\font\ita**, named **0028jap** or **0028usa** (it changes according to the button configuration, see **section 8**). If you're going to use it, take this file instead of the original **0028 (folder 1)**.

First of all, **decompress it with xenocomp**, then put it inside the **\font** folder: inside it, you'll find **xenofd.exe**.

Its usage is, as for the previous tools, very simple.

To decode the font, type in the command window **xenofd -e original_file new_file.raw**

The new file will be a raw (**256x209, with a 16 bytes header**), you can edit them with Paint Shop Pro or Photoshop.

SUGGESTION: if you're going to use Photoshop, you won't have problems, since the program asks you if you want to save the header. **However, Paint Shop Pro doesn't.** So, after finishing your editing, remember to put back the header (copy it and past it via an hex editor).

IMPORTANT: a character can be at most **16x11** pixels, but it would be crazy to have such huge letters! I suggest that you enable a grid of 16x11 while using your graphic editor.

NOTE: Not all the characters are 11 wide, though. All the letters, which are in the upper part of the graphic file, are only 8 bytes wide. There is a value in the header which controls how many characters will have this shorter width. Open the decompressed font with a hex editor, and go to **0x0A**. This hex value indicates how many characters will use the 8 pixel width, use the Windows calculator to convert the hex value into decimal numbers, and vice versa. You can increase or decrease this value according to your needs.

After adding all the characters you need, it's time to encode the font. Type **xenofd -c new_file.raw original_file**.

Compress it with xenocomp and reinsert. Edit a dialogue with Xenolater (**after updating your Xenolater table, of course**) and test if all works well.

"Pause" image and "Published by Square" logo:

Editing them might be tedious, since both of them are compressed and placed inside the game exe (their position is the same in both EXEs, CD1 and CD2), and that means **that it's very difficult to expand them**.

To edit the logo, open the exe with a hex editor, go to **0x3F2BC**, copy data till **0x3FAF4**, paste it into a new file and save it. Then, decompress it with

xenocomp. Now, take your TIM utility (personally, I suggest TIM Viewer103c), convert it into a BMP file and edit it. Reconvert into TIM, compress, copy & paste inside the exe. If the new compressed file is bigger, you won't be able to insert it back. **Trick:** the more black area you leave in the TIM file, the more it'll be compressed. So, you might try to reduce the font size of your new logo (that's what we did).

To edit the PAUSE image (the small word which appears when you press START during the game), go to **0x403D8**, the file ends at **0x404BF**. Do the same thing I just wrote about above (decompress, compress, put back, etc.), but this time you'll have to edit a .raw file (dimensions: 80x8, header: 24 bytes. Follow the same instructions given for the font).

NOTE: If you're Spanish or Portuguese, there is a surprise for you!
Since the word "Pausa" is the same in Italian, Spanish and Portuguese, we put our file inside the folder \it_stuff. It's already compressed and ready for the insertion into the exes. ;)

Miscellaneous graphics:

Before dealing with Xenomap and the difficult menu hack, let's briefly talk about some easy files (such as the compass and so on).

Compass: It's inside file **0589.unk8** (**folder 10**), it is a standard TIM. Just extract it with TIM Viewer, edit and replace.

Adult Emeralda's eyebrow fix: Some of you might have noticed that several pixels of her eyebrow, when the dialogue box is transparent, "disappear". To fix it, just take **0517.TIM** from \it_stuff and insert it.

"The End" screen: It's a simple TIM file, it's file number **2551**. Just rename it "2551.TIM", edit and insert.

Xenomap

Ah, explaining this will take quite a while.

What is Xenomap, and what does it do? Putting it simply, as the name suggests, it remaps a lot of graphics in the game that need to be translated. What I mean by remapping? Look at this pic:

```
StatusItemSellGearFile
ExitSaveLoadDeleteEquip
NewGameContinueSkillP!
AbilitymOrT OtionBu9ine
WeartsAccessoriYmentral
SoundStereoMonoWide-R
```

As you can see, some words are not entirely written. For example, there is only a single y in all the TIM. So, how does the game show the words Ability, Buy, etc.? Simply, it draws Ability first, then it places the y next to Ability and Bu, creating Ability and Buy! This allows to save space inside the TIM file, but will make its editing a very long task.

If you edit this mapping information, you'll be able to create long words even in such a small TIM.

Let's see how to do it!

Xenomap: There are four versions of this program.

1. Xenomap works with file **2614** (battle graphics)
2. Xenomap2 and Xenomap3 work with file **2593**. Xenomap2 opens the main menu graphics, while xenomap3 can edit the words written with in the Status menu (which use a special grey font)
3. Xenomap4 opens file **2607**. It too edits the words written with that grey font, but it works with the "level up" window that appears after winning a battle.

Let's start with battle graphics.

Xenomap1 (file 2614): Opening the folder **\xenomaps\2614**. Here you'll find quite a bunch of files. The two raw files contain the battle menu, but first you have to learn how to dump them properly from the actual game file. It is a tedious subject, but it's extremely important.

Take file **2614** from the game, unpack it with xenopack; open **subfile1** with a hex editor, go to **0xE2C**, copy all the data from there to the end and paste it into a new file. Move it into your **\xenomaps\2614** folder. Now, you'll have to use imgconv. This useful tool (it's a universal tool that converts a raw from 4bpp to 8bpp) will be necessary to edit those graphics with Paint Shop Pro or Photoshop.

As always, it can be used in two ways:

```
Imgconv -48 source.raw dest.raw (from 4bpp to 8bpp)  
Imgconv -84 source.raw dest.raw (from 8bpp to 4bpp)
```

Obviously, convert from 4bpp to 8bpp.

You're now ready to edit the graphics contained in this raw. You can add/delete letters, translate and more. **However, you'd better read how to remap, before starting with your editing.** When you're ready, use imgconv (this time convert from 8bpp to 4bpp) and copy & paste your new raw file into **file1**.

IMPORTANT: before inserting, be sure that the new file has exactly the same size of the original file. If it's a bit larger, just cut all the useless 00 at the end of your new files. They were added by the program you used to edit the raw.

Now it's time to remap. Take **file0** (from **2614**) and copy it to the same folder.

Open Xenomap. Uh, don't be afraid. :P

As you can see, Xenomap's window is composed by three sections: the first part allows you to navigate through the map file, the second one is used to edit it, and the third asks you to choose a raw file that will be used to show you a preview of your work. Nice feature, isn't it? Thank Chop for this.
;)

First things first; let's choose our 8bpp raw, then, File -> Open file0.

Did you notice? The Image and Piece fields now show several numbers.

Let's see what they mean: **Image** tells you how many images are mapped in that file and which one you're currently browsing,⁸ while **Piece** shows how many parts that image is made up of.

Let's check the first Image (Image 0): just push the "View" button.

The first image shows "3 points". By changing "Image number", you'll be able to see many, many interesting things. :)

However, some graphics may look awkward due to the 4bpp conversion; you can safely ignore this issue, all of the images you need to translate are in 4bpp mode.

By opening the file **battle_notes.txt** (same folder as xenomap's), you'll see a lists of all the pieces that need to be translated.

You'll also see an alphabet in which each letter has some X, Y, Width, Height values. It's a list of the letters used to write battle commands (such as Attack, Defend, Gear Options, etc.). I'm quite sure it'll be useful when translating them... as long as you don't move the words. ;)

Now, let's go to the real thing: how to edit them!

To do it, first choose the piece you want to work on. For this example, I'll take Image no. 30 (the "Attack" battle command).

Choose Piece no. 1 and click on "**View**". If the option "**Whole Image**" is marked, deactivate it and click again on View. You'll see only the letter k and its info.

TIP: if you activate the "Whole Image" option, the preview will always show the "fusion" of all the mapped pieces, that is the entire image. If you leave it off, it will show only the selected piece, **the entire image will be shown only when you select "piece no. 0".**

Offset X and Y define the letter coordinates, while Screen X and Y define where the letter will be shown "in-game". Width and Height define the dimensions of the letter.

Now, take your raw and check this data. Place your cursor on X 103, Y 28 and select a 10x14 rectangle. That's what those fields mean. Now, it should be easy to understand how all this works. :P

As for the other parameters in the program... Add and Remove simply do what they mean: adding and removing pieces. **Remember: when adding a new piece, you'll have to insert manually all the data. It's very important to copy & paste all the bytes shown in the "Other" box** (they're palette info and more things we didn't figure out).

The two **flip options** will allow you to use a "**mirror effect**". Try to activate them and use the View button: you'll understand what I mean.

You can use them to save space: for example, why drawing a "d" when you can simply mirror a "b"?

As for the "Origin" panel, it concerns only the preview function. You can change the origin of the preview (particularly useful when dealing with words that appear on the rightmost part of the screen).

After editing what you need, take your dearchived file **2614**, overwrite the original files with yours and pack it (as usual, with xenopack).

You can now insert it into the ISO: cross your fingers and test it. ;)

⁸ For "image" I also mean words such as the commands Attack, Item, and so on.

IMPORTANT: The game can't handle an indefinite amount of graphics. If too many graphic pieces appear simultaneously on screen, the game will lag. This only happens with a truly excessive amount, but if you're having this problem, try reducing the number of graphic pieces.

Well, that's all. I hope I made myself clear enough. **Remember:** save frequently your work and make backup copies, especially of the mapping file. If you perform an illegal action with Xenomap, such as trying to show the preview of an incompatible image, it might crash, and in a very rare case it might corrupt your file. This happened to me only once in our whole project, but better be careful.

Xenomap2 and 3 (file 2614): Working with them is almost the same thing. First of all, they are to be used on the same mapping file, the only difference between the two programs is the raw you're going to use for the preview: Xenomap2 works with the main menu TIM, Xenomap3 with the grey font (you'll find eng_menu.raw and eng_font.raw ready to be used along with the two programs).

Anyway, as I did before, I'll explain how to dump and reinsert them.

Unpack file **2593** with xenopack, and scan **file1** with TimViewer or another TIM ripping program.⁹ You'll find a lot of stuff and the two TIMs we are looking for: the grey font and the menu.

Extract them, convert into BMP, open them with Photoshop/Paint Shop Pro, remove their palettes (select "Grey scale") and save them as raw files. Converting them into RAWs has the important purpose of allowing you to preview your work (Xenomap doesn't support bmp or tim files).

When you need to edit the graphics, just work on the bmp and convert it back into a TIM, replace the original TIM and pack your new archive with your new file.

These two Xenomaps work exactly as the original tool. This time, the mapping file is **file2**.

Xenomap4: There's not much to say. Unpack file **2607**, you'll find a duplicate of the grey font inside **file2** (use TimViewer), while **file1** contains the mapping data. As for the font, do the same you did before.

NOTE: As you found some notes inside folder **\xenomaps\2614**, you'll find some notes along with Xenomaps 2-3-4.

⁹You can find TimViewer here: <http://rveach.romhack.org/>.

6 - HOW TO TRANSLATE: MOVIES (subtitles and more)

First of all, let me underline this: this section **won't** explain how to subtitle movies and how to rip the Japanese audio, but just how insert them into the ISO (you can't use XenoIns or xenoiso as you do for the other file). Anyway, in this package you'll find our subs (.ssa format), so that you just have to delete the Italian text and write yours (however, timers will probably need to be changed).

You can edit them as if they were normal txts, or by using another program¹⁰. Then you can apply them with Virtual Dub. So, let's see how to dump the game movies and how to put them back.

Dumping them is a very easy thing: there are dozens of tools that can do that (personally, I used PSmplay). **Just remember to save them as uncompressed avi (RGB)**, because it's mandatory in order to convert them back to the STR format.

in the \doc folder you'll find a list, named **lba_filmati.txt**, of all the movies you need to translate. After applying your subs to the movies, you're ready to convert your avi files into str (Playstation movie format) by using **Movie Converter 32** (often shortened as **MC32**). You can find this program inside the \it_subs folder.

Start it, select your avi file and, before converting it, click on the button "Attributes", mark "Sound" and "Leap Sector", then convert (it will take a while). Nothing more.

When the conversion is over, you're ready to use **reXryptA**.

NOTE: This tools wasn't programmed by our group, but by **Gemini**, a famous Italian PSX hacker and programmer. So, thank him for this program. ;)

This program is all in Italian, but don't worry, it's very simple to use. First, it will ask **the name of your iso**, comprehensive of extension, then **the name of your str file**, then **the LBA of the movie** you need to insert (**check \docs\lba_filmati.txt** to find all the LBAs you need), lastly, it will ask **the size of your str movie** (right click -> Properties on the file).

That's all, go and test your subbed movies. ;)

If everything went fine, create your PPF or Xdelta patches. **Xenoiso, XenoPatchCreator and Xenopatcher don't support STR files**. You just have to create a PPF patch for the movies, and apply it BEFORE applying the main patch. If you're using an xdelta patch, you can avoid this problem and make a single patch.

Furthermore, remember: after inserting a movie, you MUST regenerate the ECCs of your disk image. This can be done with EccRegen, a free program you can find here: <http://eccregen.cjb.net/>.

¹⁰ To make out subs, we used MEDUSA, a nice free program you can find here: <http://sourceforge.net/projects/medusa>

7 - HOW TO MAKE A PATCH (XenoPatchCreator and Xenopatcher)

Some of you might have asked themselves the meaning of this section. The reason is simple: if you expand your ISO with xenoiso, it'll be impossible to make a normal PPF patch for your translation.

Xenogears, differently from Final Fantasy VII, Chrono Cross and many other Square games, barely has any dummy text to cut.

So, it's almost sure that you'll need to recreate your ISO file.

However, should you manage to avoid this, you can simply make a PPF patch and ignore this section.

Even if you change the size of the ISOs, you can use the xdelta, though. Actually, when we translated this game back into 2004, we didn't know this tool! If you intend to use this patch format, I highly suggest to try **DeltaPatch**, a great utility made by a member of our group, **Phoenix**, which can both make and apply an xdelta patch.¹¹

Still, if you want to make a patch that allows the user to choose between the Japanese and American configurations (**see the next section**), you MUST use our tools.

If you're not interested in using our custom tools, just skip this section. If you are, please keep reading.

Let's start with xpc (Xeno Patch Creator): this program will allow you a swift creation of your patch, even if, at first, it may seem a bit too crowded with options.

Here a list of what they do:

Open Patch: Opens an xpt patch (use this to edit an already made patch)

Add File: Add an edited file to the patch file.

Add Dir: Add all the files contained inside a directory to your patch (works in the same way as Xenoiso: file positions will be determined by the name).

Edit: Edit file properties (usa/jap audio, cd number, commands. I'll explain this shortly).

Delete: Remove a file from your patch.

Make Patch: Make your patch with the files you have chosen.

Now, let's see the meaning of the three options "Voices, CD, Commands".

You have to make your choice **BEFORE** adding a file/directory. That means you can apply those parameters to hundreds of file with the "Add Directory" button).

Each flag has three parameters.

Voices: Choose "**Both**" if the file you're going to add to the list must be inserted in the ISO independently from the dub language the user has chosen. Choose "**Japanese**" if you want to insert the Japanese voices. In that case, the audio files will be inserted only if the user wants to use the Japanese audio.

¹¹ Delta patcher can be found here: <http://www.romhacking.net/utils/704/>. It's in English, do not worry!

CD: If "**Both**" is selected, it means the files will be inserted both into CD1 and CD2. You should leave "**Both**" for all of the files with the exception of the exes, since they're slightly different. Use "**CD1**" when adding the CD1 exe and "**CD2**" when adding the CD2 exe.

Commands: Choose "**Japanese**" when adding menus, font and exes hacked for forcing the Japanese command configuration. Choose "**American**" before adding files which were translated without any change to the button configuration. "**Both**" is to be used when adding files that are independent from this hack.

By using these flags, you will allow the user to customise your translated Xenogears, as long as audio and commands are concerned.

As for Xenopatcher, there's not much to say. Just choose your favourite dubbing and button configuration, the patcher will automatically recognize which CD you're applying the patch to. **If it produces an error, the ISO file is wrong or corrupted.**

8 - EXTRA: JAPANESE AUDIO AND COMMANDS

IMPORTANT: The ASM hack which restores Japanese commands was made by **Agemo**, a Chinese hacker who helped us when dealing with this "special" hack.

We decided to write this chapter to explain what we mean with "Japanese and American button configurations" and what type of hack this is.

In a nutshell, Squaresoft changed the button configuration when localising for the American market. That's what they did:

Japanese Xenogears <-> American Xenogears	Action
Circle <-> Cross	Talk/Confirm
Cross <-> Circle	Run/Cancel
Square <-> Triangle	Jump
Triangle <-> Square	Open menu

By inserting the files contained in **\USA2JAP\jap_commands**, the original Japanese button configuration will be restored.

These files **DO NOT** contain any Italian translation, they're 100% English. If you want to use the Japanese button configuration, you can work on these files instead of taking them from the original American game.

As I wrote in the previous section, the patcher will allow you to include into your patch both of the configurations, and the user will choose which one he/she likes most. That's what we did with our Italian patch. Anyway, that means you'll have to work a bit more, since you'll have to translate files from both versions (actually, most of the work is a copy & paste, but you need an extra work).

As for the Japanese audio, there's not much to say.

If you want to use it (well, it's way better than the American dubbing, in everybody's opinion) insert all of the files included in **\USA2JAP\jap_VOICES** and sub the Japanese movies instead of the American ones. Of course, you'll

need the Japanese version of the game to extract the movie and audio tracks. If you want to listen to the audio file, just use **PS Sound**.¹²

Anyway, there is a CD2 video that can give you many, many problems. Without entering into details, let's say that the 9th movie from the Japanese version of the game is a bit "peculiar", and you won't be able to extract its audio as easily as you can do with all the other movies. So, extract the American one and use the wav file you can find inside `\it_subs\jap_audio\cd2\, movie9_jap_audio.wav`.

Lastly, there is another folder inside `\USA2JAP` we didn't speak of. That's **lbs2kgs**. If your country uses the metrical system (we really don't understand why Americans stick with pounds, inches, and so on), you can make the game use **kilograms** instead of **pounds** when showing the characters' weight. Just insert the files contained in this folder, all of them are menu exes (see **section 10** for more info).

NOTE: You will have to change manually the word "**lbs**" which appears in the status menu. See **section 5** for more info.

9 - F.A.Q.

Q. There are a lot of tools here! What do I have to do to translate the game??? Pls, gimme instructions!!! Ktnxbye.

A. Sorry, but you'll have to read ALL of this guide to understand what you have to do. No shortcuts, just plain and hard reading.

Q. I have some problems. May I ask your help?

A. Of course, we'll try to help as much as our spare time will allow. If you have questions (and if you have read CAREFULLY this guide), please contact us in our forum board (here it is the address: <http://lnx.sadnescity.it/forum/>). But no dumb questions, please. :)

Q. May I redistribute these tools?

A. As long as you give us credit, yes.

Q. This guide is so confusing! Too many operations!

A. Try to follow the instructions AND to work on the program(s) at the same time. It'll be much easier, you can't learn by heart all this guide and understand everything at once.

Trust us, it will be a piece of cake if you follow the instructions step by step.

Q. I read these tools have the purpose of translating this game.

However, can I use them to do different types of hacking?

A. Well, you can use different programs from this package to extract-decompress-compress-reinsert all the files you need. ;)

Q. Are your tools bug free?

A. Our Italian translation is 100% compatible with the real PSX hardware, PS2 and PSX emulators (even on PSP). So, if you don't mess with them... I think we can say they're bug free. :P

¹² This program can be downloaded here: <http://www.romhacking.net/utils/679/>. If you're using Windows 7 or Vista and the program doesn't work, set the compatibility to Windows 95.

10 - LIST OF IMPORTANT FILES

Here you are a list of all the files you need to translate. Files and folders that are not concerned with the translation will not be listed. If you want to extract/work on a CD2 file, remember to **subtract 5** from all the numbers; anyway, since the two CDs have identical files (with the exception of movies), you can work on CD1 files and use the **CD2fix** option to reinsert them into CD2 (see **section 2**).

NOTE: If you want, you can read the original list (along with memos) in Italian, it's file **appunti_file_xeno.txt** inside **\docs**. Even if it's very outdated, it may provide some good tips.

- **STRIPCD1 (Root)**
0022: Game exe, see *Pause image* and "Published by Square" logo for more info.
- **Folder 1**
0028: Main font.
0029: Kernel (equipment, deathblows, magic and much more).
See sections 4 and 5
- **Folder 2**
0035: Compressed file, contains Battle Arena menus. *See section 4*
0038: Battle exe (compressed). Contains the words "Level up!" and HP/MPMax that need to be translated using *xenograph1.tbl*. Their data starts at the offset 0x53778. These words use the grey font file found in file 2607.
0040: Movie exe (compressed), needed for the "japanese button configuration" hack only.
0047: Compressed archive, contains Battle Arena text. *See section 4*
0049: Compressed file. Contains the menu font of the "Battling" minigame.
- **Folder 7**
0424: Japanese font. Dummy file.
- **Folder 9**
Contains the main characters' portraits.
- **Folder 10**
0589: Contains compass graphics.
- **Folder 11**
All the even files contain the main script.
- **Folder 14**
2593: Archive of compressed files.

Subfile 1 contains the main menu graphics (see **section 4** to read how to edit them), subfile 3 contains a lot of textual menus.

2594: Archive of compressed files. These files contain descriptions for equipments, items and such.

2595: Contains character names. *Uses a 16bit table*

2597: Main menu exe. Contains XENOGEARS NO. (save number), use *savexeno.tbl*

2599: Identical to file 2597.

2601: Shops exe. **If you want, you can fix a microscopic bug** (the big red choice arrow partially overlaps the words Buy, Sell, Exit), **just insert our file, there is no text to translate inside it** (you can find in \it_stuff).

2602: Gear shops exe. Contains some words that need to be translated using *xenograph1.tbl*

2603: Identical to 2597.

2605: Contains chapter names (use *savexeno.tbl*).

2607: Archive of compressed files. See *section 5*

2609: Uncompressed dummy file. Contains some names.

- **Folder 15**

2614: Contains battle graphics and textual menus. See section 5 to find how to edit its graphics; subfiles 15 and 37 contain text.

- **Folder 16**

Extensionless files contain monster names and their techs.
See section 4

- **Folder 17**

3088: Archive of compressed files. Contains battle dialogues.
See section 4

3091: Uncompressed file, battle menus.

NOTE: It's a duplicate of file 2594, subfile 15.

3096: Uncompressed file, seems a duplicate of file 3091.

3097: Uncompressed, Gear options menu (only in battle). Duplicate of file 2594, subfile 20.

3098: Uncompressed, duplicate of file 2594, subfile 21.

- **Folder 24**

3957: Compressed copy of file 2597. Used when in the world map.
3958: Duplicate of file 2593.

- **Folder 26**
3964: First **world map** file, it's a compressed archive.
Subfile 7 contains World Map locations.

NOTE: There are many different world map archives. Subfile 7, however, remains the same. So, translate one of them and reuse it for all the world maps.

- **Folder 27**
3975: World map archive.
- **Folder 28**
3986: World map archive.
- **Folder 29**
3997: World map archive.
- **Folder 30**
4008: World map archive.
- **Folder 31**
4019: World map archive.
- **Folder 32**
4030: World map archive.
- **Folder 33**
4041: World map archive.
- **Folder 34**
4052: World map archive.

11 - SPECIAL THANKS

Here is a list of the many people that have helped us developing these utilities. They were very important to us, and if you're going to use our tools, you too should thank them.

Pixel: Pixel is a French hacker who started to work on Xenogears before our project even started. He helped us with debugging our compression routine. His work was very precious, and he saved us a lot of time. Merci beaucoup, Pixel!

Agemo: To put it simply, without this genius hacker, our "Japanese configuration" hack would have been much harder, if not impossible. Thanks, man!

Gemini: Thanks for all of your tips and help when converting and inserting the movie files!

rulv: Thank you for telling us how to edit the words in the "Level up" screen. Our Italian translation didn't need to alter them, but many people will find your information very useful!

LaughingMan: Thanks for the precious info about how to edit the font width value!

12 - CHANGELOG

Version 1.1 - 22/05/2011 (public release)

- The user's guide has been improved. Many mistakes were fixed, and the English text rendering has, hopefully!, been improved too.
- Added some new information about recent discoveries on the font file and battle graphics, which were missing in the original release.
- The package now includes the "MC32" program for converting the movie files.
- "Special thanks" and "Changelog" sections added. "The group" section has been updated.

Version 1.0 - 06/10/2007 (public release)

- Initial release of the package, which contains all the materials to edit and translate the game, along with a complete user's guide.

13 - THE GROUP

The SadNES cITY group:

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