

# Why you should use a clean Set

This PDF will teach you how to create a clean Set of Games for the MiST FPGA. Once you have finished this you have a clean Set of Games with:

- Only working Games, of course I cannot guarantee this, I only checked a few seconds of each game.
- Only a handful of duplicate Games.
- Easier maintaining your Rom collection for your MiST FPGA.
- Better readability on the OSD because the filename is cut down to the Game name and if the Game has multiple disks also the disk Number. The Publisher name will only be shown if there are more Games with the Same Name. All other unneeded Information in the Filename like Cracker group, Release Date, Trainer Info, Pix, Docs and so on are removed from the Filename. Now the serious Rom Collector may ask if this is needed and I show 2 examples why this will make things better readable.

Example 1 – Legend of Faerghail from the Amiga Tosec Set contains these Disks:

- Legend of Faerghail v2.0e (1990-07-13)(Rainbow Arts)(Disk 1 of 3)(Boot)[cr Angels][h Spaike]
- Legend of Faerghail v2.0e (1990-07-13)(Rainbow Arts)(Disk 2 of 3)(1)[cr Angels]
- Legend of Faerghail v2.0e (1990-07-13)(Rainbow Arts)(Disk 3 of 3)(2)[cr Angels]

As we can see, Disk 1 is the Boot Disk and Disk 2 is not Disk 2, it is Disk 1. If the Game ask you to Enter Disk 1, it doesn't mean you should Enter the Boot Disk which is Labeled Disk 1 into the Drive. Instead you have to Enter Disk 2 because Disk 2 is the real Disk 1. In the cleaned Set it looks like this:

- Legend of Faerghail (Disk 1 of 3)(Boot)
- Legend of Faerghail (Disk 2 of 3)(1)
- Legend of Faerghail (Disk 3 of 3)(2)

This is better and faster readable in the OSD because you don't have to wait that long for the Scrolling until the OSD comes to the End of the Line to see that Disk 2 is in reality Disk 1. But not only it is faster readable, the Tosec Set has 26 Images of this Game! Dupes, different Cracker Groups, Bad Dumps and so on but only 3 Disks are needed. This also shortens the File Listing in the OSD and so the Scrolling through the Directory and it saves space on the SD Card too.

# Why you should use a Clean Set

Example 2 – Midwinter II – Flames of Freedom from the Amiga Tosec Set contains the Disks:

- Midwinter II - Flames of Freedom v1.7.9.1991 (1991-09-07)(Rainbird)(DE)(Disk 1 of 3)[cr TRSI]
- Midwinter II - Flames of Freedom v1.7.9.1991 (1991-09-07)(Rainbird)(DE)(Disk 2 of 3)(Graphics)[cr TRSI]
- Midwinter II - Flames of Freedom v1.7.9.1991 (1991-09-07)(Rainbird)(DE)(Disk 3 of 3)(Missions)[cr TRSI]

The Game does not ask you for Disk 3, instead it ask you to insert the “Missions” Disk and again you have to wait in the OSD until the End of the Scrolling to see that Disk 3 is the one the game asks for. If a Game has a lot of Disks and don't ask for a Disk with a Number like this example, you can imagine it will take a long time until you find the right Disk. The clean Set looks like this:

- Midwinter II - Flames of Freedom (Disk 1 of 3)
- Midwinter II - Flames of Freedom (Disk 2 of 3)(Graphics)
- Midwinter II - Flames of Freedom (Disk 3 of 3)(Missions)

And again it is Better and faster readable in the OSD. The Tosec Set contains 17 Disks of this Game while only 3 are needed for playing.

Also very Important is that I did remove all **VIRUS Infected Disks** which are marked in the Tosec Sets like [v Sadam 1] and so on. The v stands for Virus in the Filename in case you didn't know that. But for the Amiga Tosec Set I did more. All Images in my clean Set are scanned with a PC Anti-Virus for Amiga ADF Disks called ADFScan. This Tool did find hundreds of more Viruses in the Tosec Set which aren't marked as Virus Infected!!! I do not need to mention that these virus infected Disks are also not in my collection even if they are false positives.



# Before we start...

Never ever ask me, the Author of Romvault, the Author of Extractnow, The developer of a MiST Core or the Developer of the MiST FPGA for ze Romz !!!

Some real bad things may happen if you do so like :

Loss of your Rom Collection due Hardisk Fault...  
Your MiST FPGA overheat and melt or even more worse, your Dog may poop on the Kitchen Floor !

Ask Google for Enlightenment!

# What we need

These Tools are needed:

RomVault (2.2.1) which can be downloaded at [www.romvault.com](http://www.romvault.com)

ExtractNow Portable which can be downloaded at [www.softpedia.com/get/PORTABLE-SOFTWARE/Compression-Tools/Portable-ExtractNow.shtml](http://www.softpedia.com/get/PORTABLE-SOFTWARE/Compression-Tools/Portable-ExtractNow.shtml)

And of course ze Romz ! In this example i use the Tosec Commodore C64 PRG Set (2014-10-31) but it is the same procedure for other Systems like Amiga, Nes, Magnavox, Colecovision and so on. Of Course you need the MiST Dat File of the System that you want to build up for. The C64 Dat won't build a Nes Set !

# What I expect from you

Brain !

Basic Knowledge how to copy and/or move Files and Folders. If you lack the knowledge of how to operate the OS, then this is not for you. Ask a friend for help before you delete/ruin your Rom Collection.

Enough Hard drive Space to build a clean Set.

# A Word of Warning !

Please **ALWAYS make a Backup of your Romset** BEFORE you do anything. RomVault will rename and Move Files to other Directories. It even delete Files. If anything goes wrong you still have a Backup and can start again. Only use a copy of your collection that you want to clean.

And always only use 1 Dat to clean 1 Set at the same time. You can use several Dats with all your Roms at the same time if you are experienced enough and are familiar with Romvault, it just take longer to create multiple Sets at once but this woks too. I am in no way responsible if you didn't make a Backup of your Files!

If you already use Romvault for other Rom Management than for the MiST FPA, please make another Directory and use a new Copy of RomVault so things won't get mixed and Matched.

If you already use ExtractNow (maybe the Installer Version) then please also make a new copy for the portable Version of the Link i did already give. We change the ExtractNow Default Settings to fit our needs.



# What does RomVault do

RomVaults job is to calculate a Checksum for each File it finds in the ToSort Folder. It Compares then the File Checksum with my Database. If the File is found in the Database, Romvault will rename now the found File and move it from the ToSort Folder to the correct Folder. But RomVault does more. Romvault compress each file into a Zip File. This is something we do not want or need because the MiST FPGA Cores can't read Files inside Zips. To correct this and keep the Folder Structure intact, we use another Tool called ExtractNow.

# What does ExtractNow do

ExtractNow's Job is to uncompress all Zips inside a Folder with many Subfolders which we drag and Drop into ExtractNow's Window and keep the Folder Structure intact. This is important because it allows us once finished, that we can simply drag and drop the created Folders (which includes the renamed Files from RomVault) onto the SD Card and we don't need to sort the Files alphabetically in case there are thousands of Files like the C64/Amiga Set and others. It's just like Drag and Drop the Folder onto the SD Card, Copy the Core onto SD Card and you are Ready to go. No other Steps are required.

# DatRoot and RomRoot

The DatRoot Folder from my Archive which we copy inside the RomVault Folder contains my Databases. Each Database is a Text file which Includes the Names of the Games and the CRC32 and MD5 Checksum. RomVault reads these Databases and compare it against the Files inside the ToSort Directory.

The RomRoot Folder only contains empty Subdirectories. This will be the Folder Structure in which RomVault will move the correct Files into it. It's also possible that there are some Save Disks which I did create for Games who did need it (Mostly RPGs for the Amiga). Also possible is that there is a Config File for the core. Why ? Some Cores allow different Settings for RAM/Graphics/OS and so on like the Amiga with his Memory Expansion or Kickstart or the Atari ST with his TOS. If you use other Settings than mine ,it may break some Games from playing. For that Reason I did include my Config for the Core.

# This sounds so complicated

To be Honest. It is absolutely not complicated. In Fact, it is Super Easy if you follow the Step by Step Instructions. Once my Files from the Archive is copied to the Main folder of Romvault we only click 4 Icons in Romvault to Create the Clean Set. Once finished we only Drag and drop a Folder into the ExtractNow Main Window to uncompressing the Files. And that's all. We can then Copy the Created Folders onto the SD Card with the Core and we are ready to go.

## What else do you need to know

I did create the Databases for me and my Son to easier maintain the Sets and to get rid of the Dupes and nonworking Games. At that point it was not planned to release these later for others. Started with the easier Sets like Coleco and Atari 2600 all did go quick to rename and testing of Playability. With the Amiga Set it took some Weeks to make a clean Set but with the C64 Set it started to get really long and boring because of the loading and Decrunching Time of the Games and more Worse, because the Core could not make a Hardreset. The C64 Core only makes a Soft Reset and so many Games are memory Resistant. I had to power down the MiST Device each time, wait approx. 10 seconds to clean the memory, power it on and scroll back into the OSD File browser to the next Game. It took me several Months to create the C64 Set. At some Point in the Process of Creating the C64 Set i had the Idea to build Dat Files for the MiST Sets because of legal Reasons which did prevent me from sharing my Collection of Roms. With This Sets everyone should be able to build a Clean Set without the Hassle of Time consuming Renaming and Testing. Why I tell you this ? Because if they are a German Version of a Game, the English One was a Dupe for me and did not finds its way into the Database because my Priority of the Game Language at that time was German -> English -> All others. When I realized that this may be a Problem for others, Sets for Coleco, Nes, PC-Engine, Master System, Atari 2600, Atari 5200, Amiga and part of the C64 where already done. So until i update the C64 and Amiga Set, you have to stick with the German Version of some Games or put manually your needed Game to the Set. Sorry for that but Updates are planned but I cannot tell you when because this is a One Man show and renaming and testing did take some time if you do it alone.



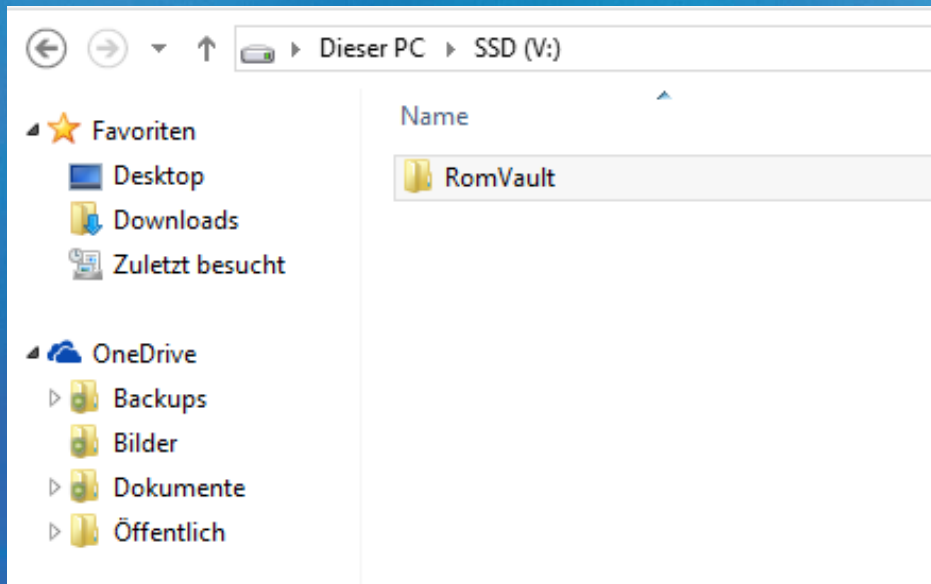
# Preparations

Did I mention that you should backup your Rom Collection you want to clean up ? You did it already ? Fine, now let's Begin with the Preparations. If you did not already download RomVault and ExtractNow, then you need to do it now.

[www.romvault.com](http://www.romvault.com)

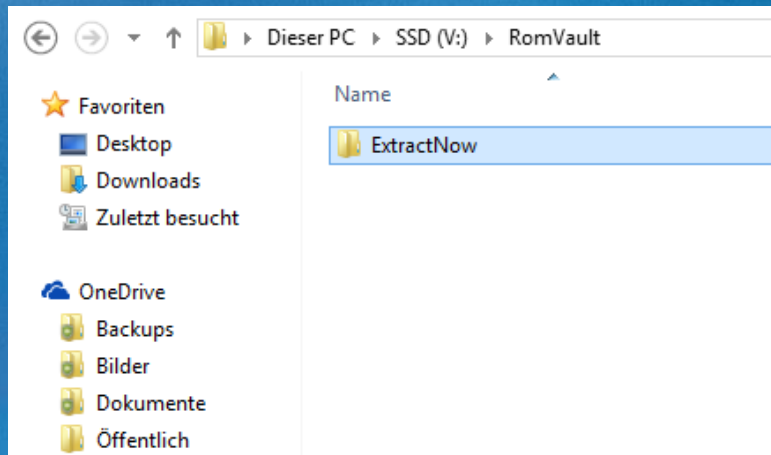
[www.softpedia.com/get/PORTABLE-SOFTWARE/Compression-Tools/Portable-ExtractNow.shtml](http://www.softpedia.com/get/PORTABLE-SOFTWARE/Compression-Tools/Portable-ExtractNow.shtml)

First make a Folder called RomVault on any of your Drives but keep it close to the Root Directory because of some Path/File Limitations of Windows if the full Pathname+Filename is too long. In my Example, I did create it on Drive V in the Root.

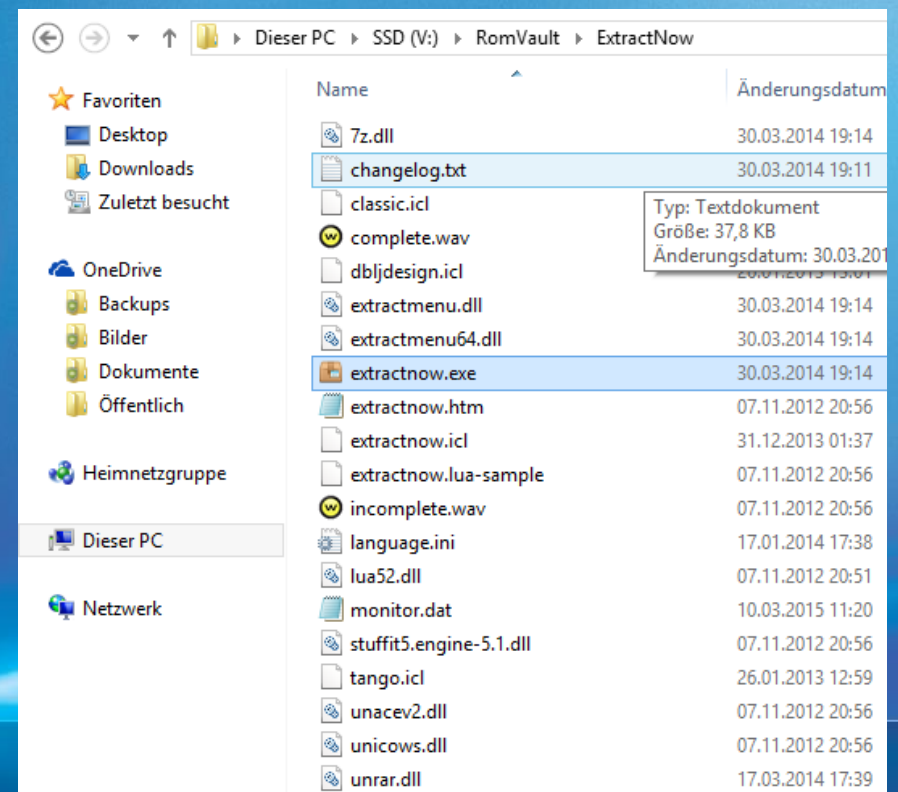




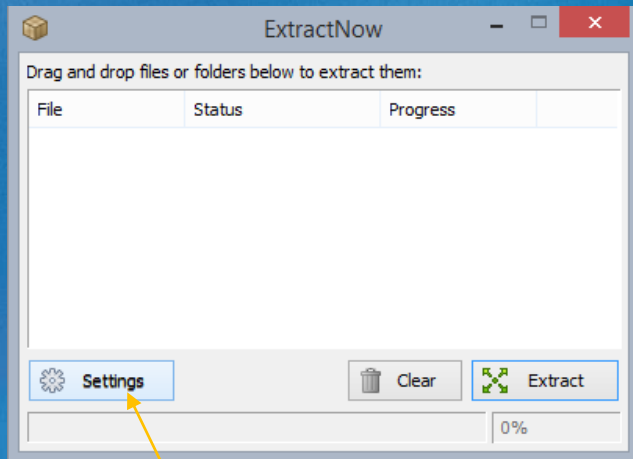
Next we create another Folder called ExtractNow inside the Main Folder of Romvault. In my Example in V:\RomVault\ so the Path is now V:\RomVault\ExtractNow\



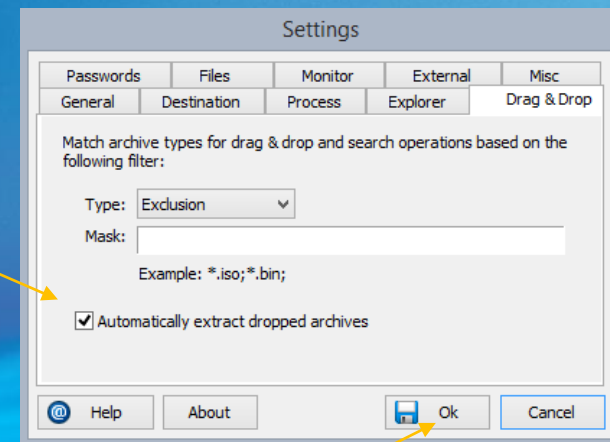
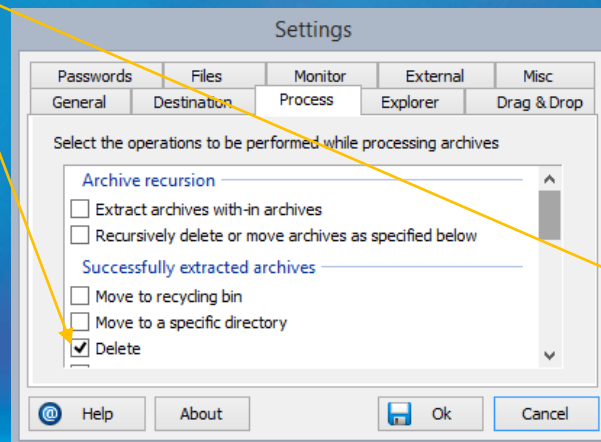
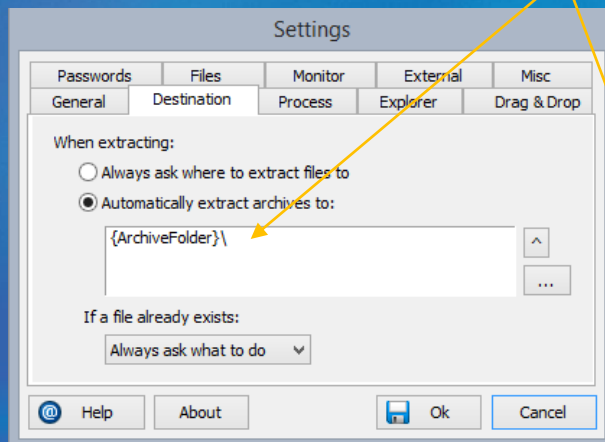
Extract all Files from the ExtractNow Zip into the folder ExtractNow.



Now execute the extractnow.exe from this Folder. We need to change now some Settings and save it so we don't need to enter them each time and when we drag and drop later the folder with the clean set, it will automatically extract all files, delete the Zip Archives but leaves the folder structure as it is.



Enter the Settings and change it so it looks like these pictures

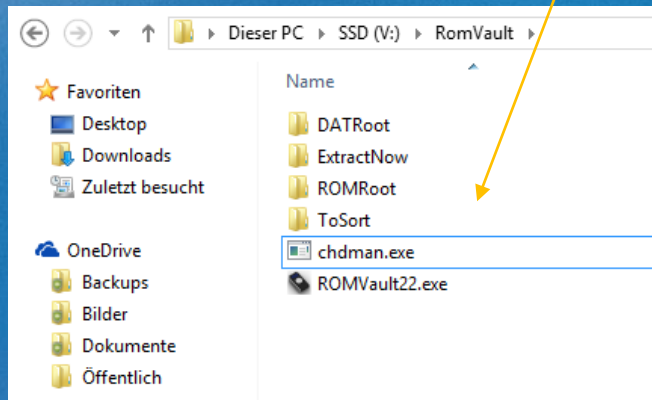


You can now close ExtractNow.

After you changed the Settings, save it by clicking on the OK Button

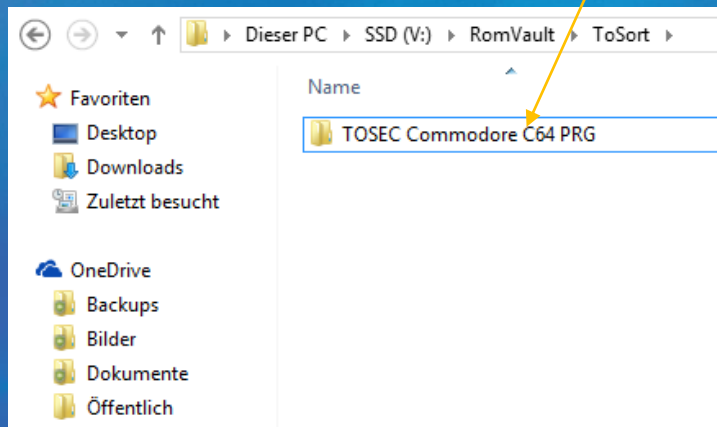


Now we need the Archive with RomVault. Extract it into the RomVaults Folder. Make now a Copy from the whole RomVault Folder and keep it as Backup.



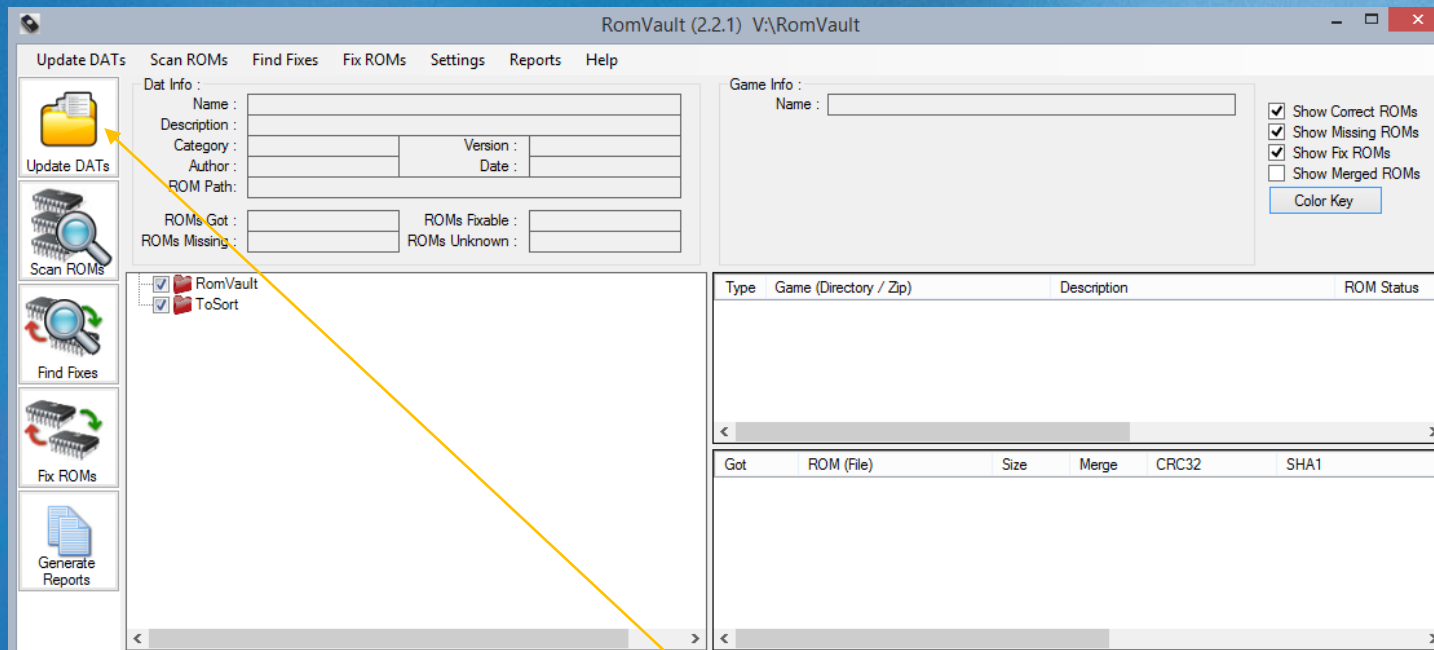
Now we extract the DatRoot and RomRoot Folders from the Archive which contains the Dats for the MiST FPGA. In my Example it is from MiST\_C64\_PRG\_Games\_DAT\_13-03-2015.zip. Simply overwrite the existing DatRoot and RomRoot folders which already exists in the Main folder of RomVault.

Next we need to put all the Roms/Diskimages into the ToSort folder. It doesn't matter if they are in plain format or zipped. It also doesn't matter if they are in folders and subfolders. Romvault will recursively scan the ToSort Directory. In my example, I put the whole TOSEC 2014-10-31 C64 Games PRG folder inside of the ToSort Folder (Did I say that you should always work with a Backup of your Rom Collection ?)



# Building of a clean Set with RomVault

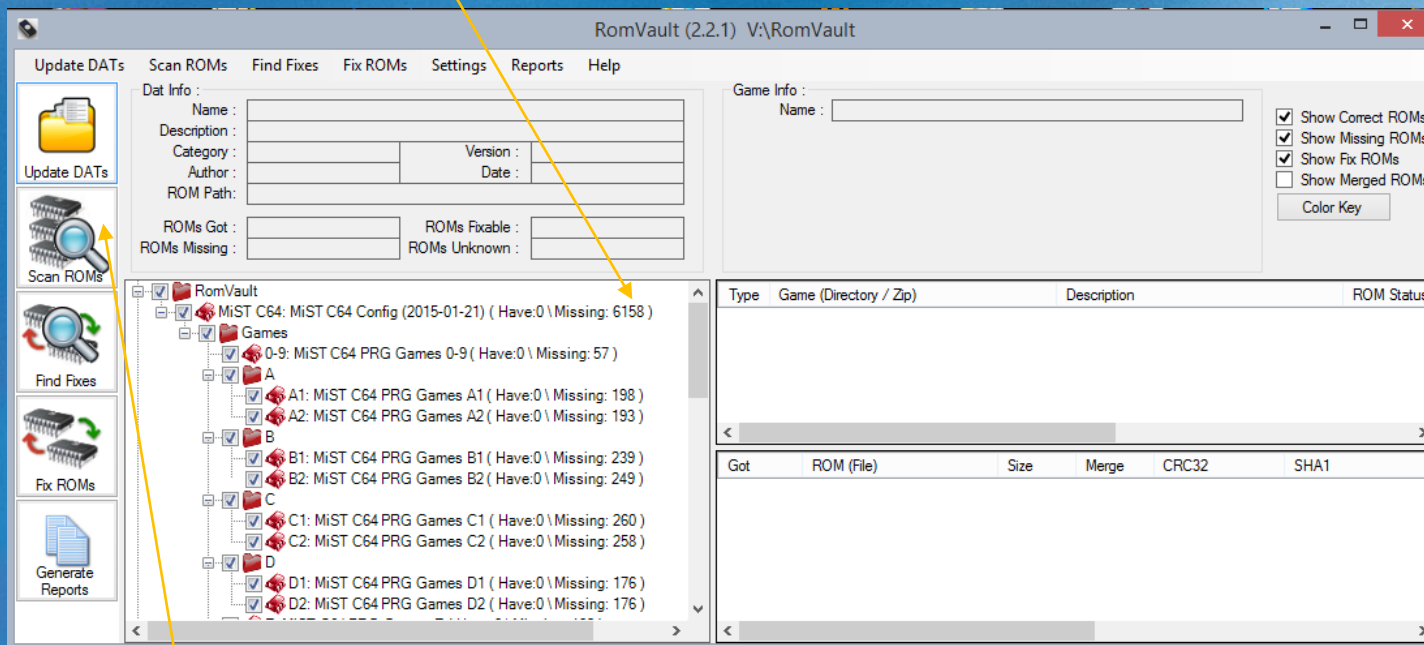
Now start ROMVault22.exe and RomVault will show you its Graphical Interface.



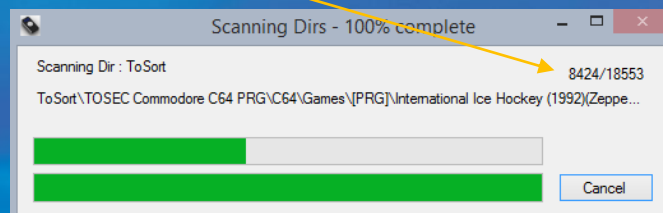
I did resize it a Bit so it fits better on the Screen of this PDF. In the Directory Tree you will see 2 red folder symbols. They are red because they are empty. First we need to tell Romvault that it should look into his Database Folder (the DatRoot Folder which we did copy into RomVaults Main Folder) for new Dats. We do this by clicking on the Update Dats Button. RomVault now finds our Dats and reads it.



RomVault shows you now the Directory Tree with a lot of Red (empty) Folders and Subfolders. We can see now that this Dat contains 6158 Games in his Databases



Now we tell RomVault to Look into the ToSort Folder and calculate the Checksums of each File it finds in there. To do this, we click on the Scan ROMs Button and RomVault shows us a progress Bar while its calculating the Checksums. We also see that in the ToSort folder are 18553 Files in (the whole Toset Set of C64 PRGs)



RomVault (2.2.1) V:\RomVault

Update DATs Scan ROMs Find Fixes Fix ROMs Settings Reports Help

**Dat Info :**

Name :

Description :

Category :  Version :

Author :  Date :

ROM Path :

ROMs Got :  ROMs Fixable :

ROMs Missing :  ROMs Unknown :

**Game Info :**

Name :

☒ Show Correct ROMs

☒ Show Missing ROMs

☒ Show Fix ROMs

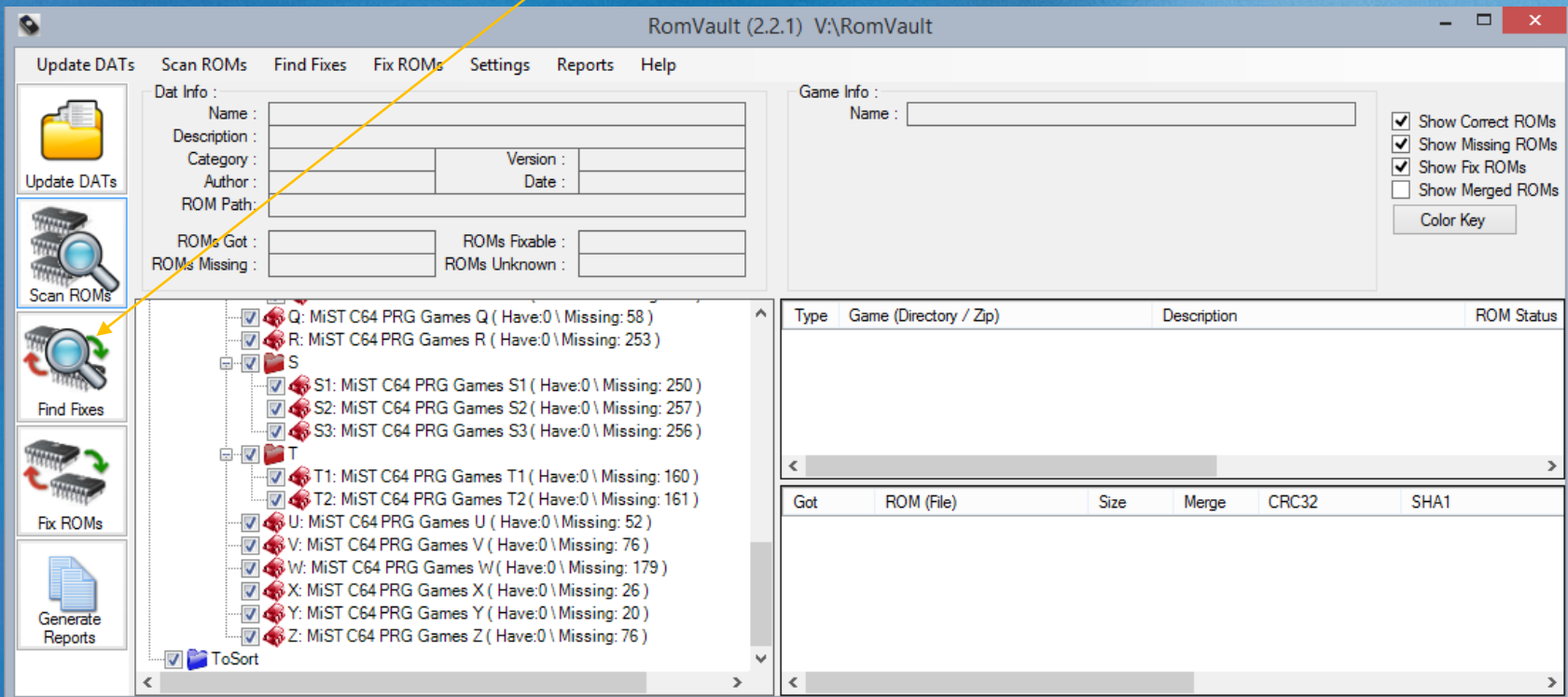
☐ Show Merged ROMs

**Games List:**

- ☒ Q: MiST C64 PRG Games Q ( Have:0 \ Missing: 58 )
- ☒ R: MiST C64 PRG Games R ( Have:0 \ Missing: 253 )
- ☒ S
- ☒ S1: MiST C64 PRG Games S1 ( Have:0 \ Missing: 250 )
- ☒ S2: MiST C64 PRG Games S2 ( Have:0 \ Missing: 257 )
- ☒ S3: MiST C64 PRG Games S3 ( Have:0 \ Missing: 256 )
- ☒ T
- ☒ T1: MiST C64 PRG Games T1 ( Have:0 \ Missing: 160 )
- ☒ T2: MiST C64 PRG Games T2 ( Have:0 \ Missing: 161 )
- ☒ U: MiST C64 PRG Games U ( Have:0 \ Missing: 52 )
- ☒ V: MiST C64 PRG Games V ( Have:0 \ Missing: 76 )
- ☒ W: MiST C64 PRG Games W ( Have:0 \ Missing: 179 )
- ☒ X: MiST C64 PRG Games X ( Have:0 \ Missing: 26 )
- ☒ Y: MiST C64 PRG Games Y ( Have:0 \ Missing: 20 )
- ☒ Z: MiST C64 PRG Games Z ( Have:0 \ Missing: 76 )

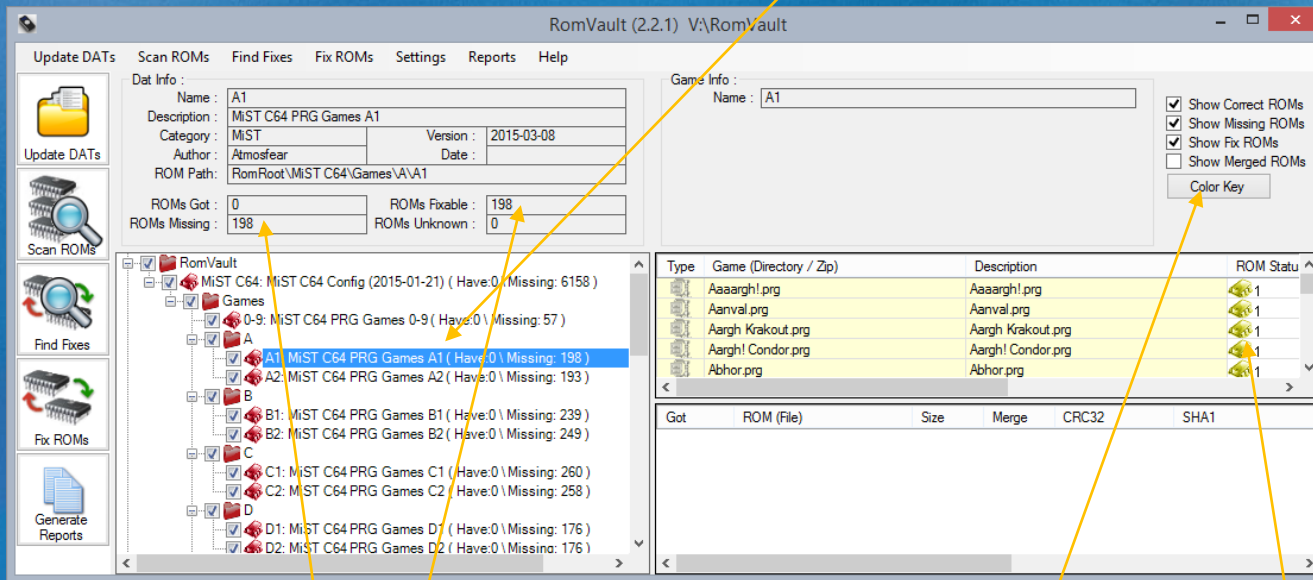
☒ ToSort

Type	Game (Directory / Zip)	Description	ROM Status
Got	ROM (File)	Size	Merge
		CRC32	SHA1





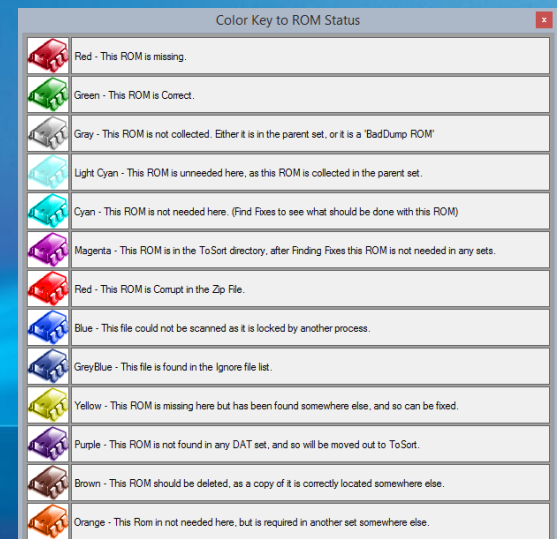
A Second later and RomVault has the Job done. If we now click on one of the Red Folders, we get some Information on the missing Files in this Folder.



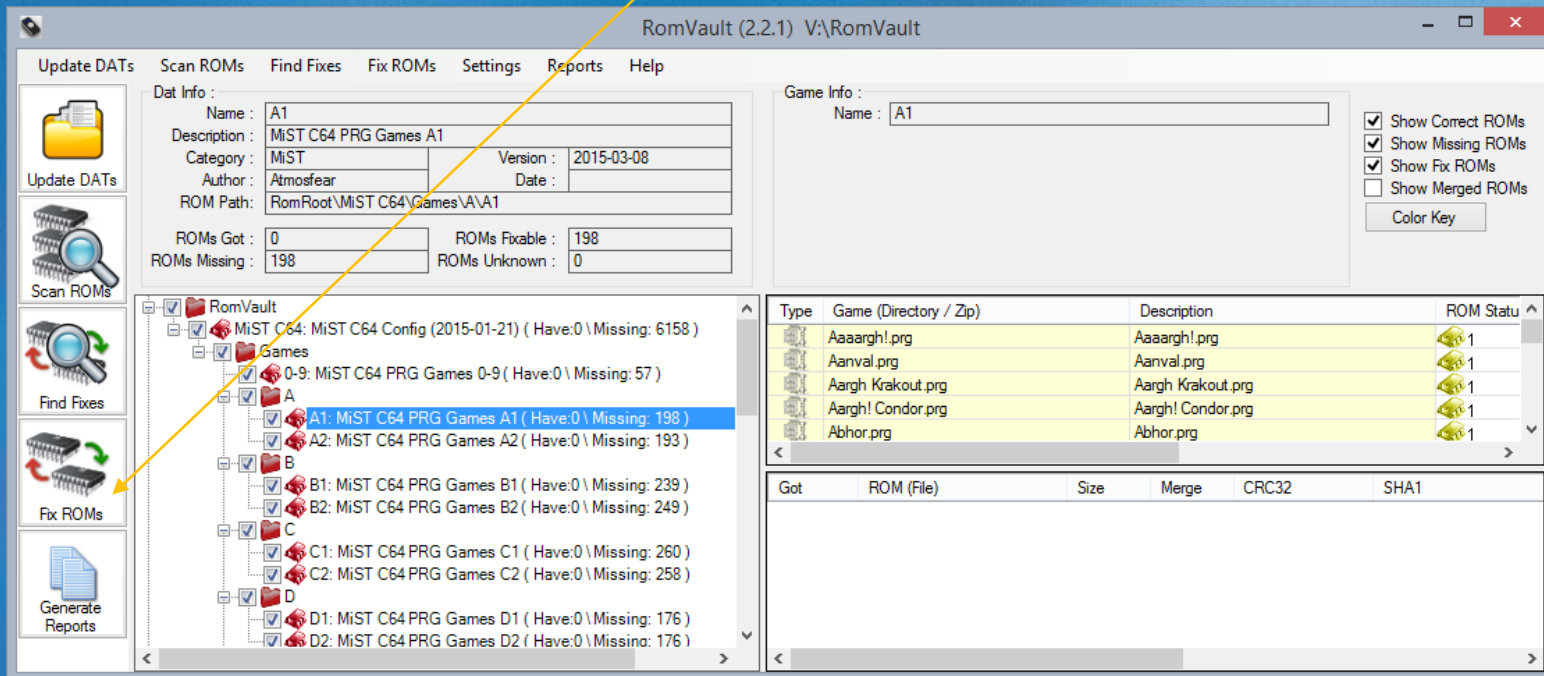
We can see in the Right Panel The Names of the Files which should be in this Directory. The Yellow IC symbol says that This File is NOT in This Folder but can be found in another Folder (In this case in the ToSort Directory which contains the complete Tosec Set because we did copy it in there). A Red IC Symbol stands for a File which is not found but there are more Colors. The complete Color Chart can be found by clicking on the Color Key Button.

We also see that the Highlighted A1 Folder in the Directory Tree contains 198 Files. All of them are fixable.

And all of them are missing in the Highlighted Folder.

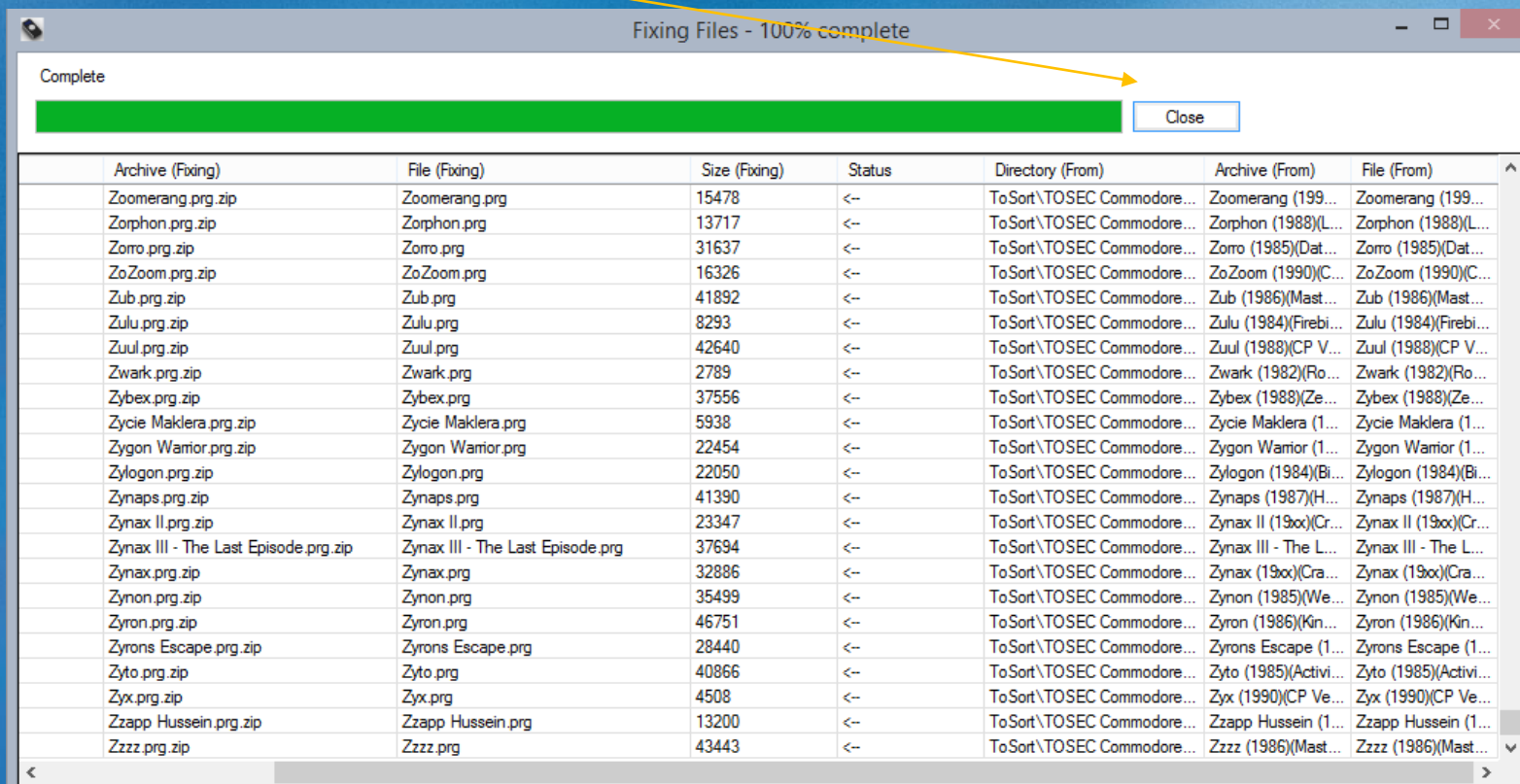


Now we come to the final Step in RomVault so that we have a clean Set. The Fixing of the Files. Since RomVault now knows the location of each good File, RomVault is now able to move each file to the right destination Folder and rename the File so the Filename matches the one in the DAT. All we now have to do is clicking on the Button Fix ROMs.





Another Window with a progress Bar opens and shows you the Progress of Fixing your Files. This may take a while depending on how fast is you PC, How fast is your HD, the size of the Files and of course on how many Files are in the ToSort Folder. Once it's done, you can close the Window by clicking the Close Button.



Fixing Files - 100% complete

Complete

Close

Archive (Fixing)	File (Fixing)	Size (Fixing)	Status	Directory (From)	Archive (From)	File (From)
Zoomerang.prg.zip	Zoomerang.prg	15478	<-	ToSort\TOSEC Commodore...	Zoomerang (199...	Zoomerang (199...
Zorphon.prg.zip	Zorphon.prg	13717	<-	ToSort\TOSEC Commodore...	Zorphon (1988)(L...	Zorphon (1988)(L...
Zorro.prg.zip	Zorro.prg	31637	<-	ToSort\TOSEC Commodore...	Zorro (1985)(Dat...	Zorro (1985)(Dat...
ZoZoom.prg.zip	ZoZoom.prg	16326	<-	ToSort\TOSEC Commodore...	ZoZoom (1990)(C...	ZoZoom (1990)(C...
Zub.prg.zip	Zub.prg	41892	<-	ToSort\TOSEC Commodore...	Zub (1986)(Mast...	Zub (1986)(Mast...
Zulu.prg.zip	Zulu.prg	8293	<-	ToSort\TOSEC Commodore...	Zulu (1984)(Firebi...	Zulu (1984)(Firebi...
Zuul.prg.zip	Zuul.prg	42640	<-	ToSort\TOSEC Commodore...	Zuul (1988)(CP V...	Zuul (1988)(CP V...
Zwark.prg.zip	Zwark.prg	2789	<-	ToSort\TOSEC Commodore...	Zwark (1982)(Ro...	Zwark (1982)(Ro...
Zybex.prg.zip	Zybex.prg	37556	<-	ToSort\TOSEC Commodore...	Zybex (1988)(Ze...	Zybex (1988)(Ze...
Zycie Maklera.prg.zip	Zycie Maklera.prg	5938	<-	ToSort\TOSEC Commodore...	Zycie Maklera (1...	Zycie Maklera (1...
Zygon Warrior.prg.zip	Zygon Warrior.prg	22454	<-	ToSort\TOSEC Commodore...	Zygon Warrior (1...	Zygon Warrior (1...
Zylogon.prg.zip	Zylogon.prg	22050	<-	ToSort\TOSEC Commodore...	Zylogon (1984)(Bi...	Zylogon (1984)(Bi...
Zynaps.prg.zip	Zynaps.prg	41390	<-	ToSort\TOSEC Commodore...	Zynaps (1987)(H...	Zynaps (1987)(H...
Zynax II.prg.zip	Zynax II.prg	23347	<-	ToSort\TOSEC Commodore...	Zynax II (19xx)(Cr...	Zynax II (19xx)(Cr...
Zynax III - The Last Episode.prg.zip	Zynax III - The Last Episode.prg	37694	<-	ToSort\TOSEC Commodore...	Zynax III - The L...	Zynax III - The L...
Zynax.prg.zip	Zynax.prg	32886	<-	ToSort\TOSEC Commodore...	Zynax (19xx)(Cra...	Zynax (19xx)(Cra...
Zynon.prg.zip	Zynon.prg	35499	<-	ToSort\TOSEC Commodore...	Zynon (1985)(We...	Zynon (1985)(We...
Zyron.prg.zip	Zyron.prg	46751	<-	ToSort\TOSEC Commodore...	Zyron (1986)(Kin...	Zyron (1986)(Kin...
Zyrons Escape.prg.zip	Zyrons Escape.prg	28440	<-	ToSort\TOSEC Commodore...	Zyrons Escape (1...	Zyrons Escape (1...
Zyto.prg.zip	Zyto.prg	40866	<-	ToSort\TOSEC Commodore...	Zyto (1985)(Activi...	Zyto (1985)(Activi...
Zyx.prg.zip	Zyx.prg	4508	<-	ToSort\TOSEC Commodore...	Zyx (1990)(CP Ve...	Zyx (1990)(CP Ve...
Zzapp Hussein.prg.zip	Zzapp Hussein.prg	13200	<-	ToSort\TOSEC Commodore...	Zzapp Hussein (1...	Zzapp Hussein (1...
Zzzz.prg.zip	Zzzz.prg	43443	<-	ToSort\TOSEC Commodore...	Zzzz (1986)(Mast...	Zzzz (1986)(Mast...

Now the folders in the Directory Tree should have changed their color to green which indicates that all files in the folder are now complete.

The screenshot shows the RomVault (2.2.1) application window. The interface includes a menu bar (Update DATs, Scan ROMs, Find Fixes, Fix ROMs, Settings, Reports, Help), a left sidebar with icons for these functions, and a main area divided into 'Dat Info', 'Game Info', and a 'ROM Status' table.

**Dat Info:**

- Name: MiST C64
- Description: MiST C64 Config (2015-01-21)
- Category: MiST
- Author: Atmosfear
- Version: 2015-01-21
- Date:
- ROM Path: RomRoot\MiST C64
- ROMs Got: 6158
- ROMs Missing: 0
- ROMs Fixable: 0
- ROMs Unknown: 0

**Game Info:**

- Name: MiST C64

**ROM Status Table:**

Type	Game (Directory / Zip)	Description	ROM Status
C64.CFG	C64.CFG	C64.CFG	1
Games	Games		6157

**Directory Tree (Left Panel):**

- RomVault
  - ✓ MiST C64: MiST C64 Config (2015-01-21) ( Have:6158 \ Missing: 0 )
    - ✓ Games
      - ✓ 0-9: MiST C64 PRG Games 0-9 ( Have:57 \ Missing: 0 )
        - ✓ A
          - ✓ A1: MiST C64 PRG Games A1 ( Have:198 \ Missing: 0 )
          - ✓ A2: MiST C64 PRG Games A2 ( Have:193 \ Missing: 0 )
        - ✓ B
          - ✓ B1: MiST C64 PRG Games B1 ( Have:239 \ Missing: 0 )
          - ✓ B2: MiST C64 PRG Games B2 ( Have:249 \ Missing: 0 )
        - ✓ C
          - ✓ C1: MiST C64 PRG Games C1 ( Have:260 \ Missing: 0 )
          - ✓ C2: MiST C64 PRG Games C2 ( Have:258 \ Missing: 0 )
        - ✓ D
          - ✓ D1: MiST C64 PRG Games D1 ( Have:176 \ Missing: 0 )
          - ✓ D2: MiST C64 PRG Games D2 ( Have:176 \ Missing: 0 )
        - ✓ E: MiST C64 PRG Games E ( Have:182 \ Missing: 0 )
        - ✓ F
          - ✓ F1: MiST C64 PRG Games F1 ( Have:150 \ Missing: 0 )
          - ✓ F2: MiST C64 PRG Games F2 ( Have:147 \ Missing: 0 )
        - ✓ G: MiST C64 PRG Games G ( Have:249 \ Missing: 0 )
        - ✓ H: MiST C64 PRG Games H ( Have:219 \ Missing: 0 )
        - ✓ I: MiST C64 PRG Games I ( Have:121 \ Missing: 0 )
        - ✓ J: MiST C64 PRG Games J ( Have:98 \ Missing: 0 )
        - ✓ K: MiST C64 PRG Games K ( Have:124 \ Missing: 0 )
        - ✓ L: MiST C64 PRG Games L ( Have:180 \ Missing: 0 )
        - ✓ M
          - ✓ M1: MiST C64 PRG Games M1 ( Have:249 \ Missing: 0 )
          - ✓ M2: MiST C64 PRG Games M2 ( Have:229 \ Missing: 0 )
        - ✓ N: MiST C64 PRG Games N ( Have:130 \ Missing: 0 )
        - ✓ O: MiST C64 PRG Games O ( Have:126 \ Missing: 0 )
        - ✓ P
          - ✓ P1: MiST C64 PRG Games P1 ( Have:162 \ Missing: 0 )
          - ✓ P2: MiST C64 PRG Games P2 ( Have:161 \ Missing: 0 )
        - ✓ Q: MiST C64 PRG Games Q ( Have:58 \ Missing: 0 )

The folders in the directory tree are green, indicating they are complete. A yellow arrow points from the text above to the 'Games' folder in the tree.

We also see on each Folder that there are zero Missing Files. That means that you have now a complete clean Set. All Nonworking Games and Dupes are still in the ToSort Directory.

If RomVault did not find all Files it may be look like this:

The screenshot shows the RomVault (2.2.1) application window. The left sidebar contains icons for 'Update DATs', 'Scan ROMs', 'Find Fixes', 'Fix ROMs', and 'Generate Reports'. The main window is divided into several sections:

- Dat Info:** Displays information for the selected DAT 'E'. It includes fields for Name, Description, Category, Author, Version, Date, ROM Path, ROMs Got (179), ROMs Missing (3), ROMs Fixable (0), and ROMs Unknown (0).
- Game Info:** Displays information for the selected game 'Eclissi.prg', including Name, Description, Manufacturer, Clone of, Year, ROM of, and Total ROMs.
- Checkboxes:** On the right, there are checkboxes for 'Show Correct ROMs', 'Show Missing ROMs', 'Show Fix ROMs', and 'Show Merged ROMs', along with a 'Color Key' button.
- Tree View:** A hierarchical tree view on the left shows the structure of the DAT. The folder 'E: MiST C64 PRG Games E (Have:179 \ Missing: 3)' is highlighted, indicating it contains missing files. Below it, various game folders (A through Q) are listed with their respective 'Have' and 'Missing' counts.
- Game List:** A table in the center-right lists the games found in the selected DAT. The 'Eclissi.prg' entry is highlighted in red, indicating it is missing. The table has columns for Type, Game (Directory / Zip), Description, and ROM Status.
- File Details:** At the bottom, a table provides detailed information for the selected missing file 'Eclissi.prg', including its size, CRC32 checksum, SHA1 hash, and MD5 hash.

Yellow arrows point from the text below to the 'E' folder in the tree view and the 'Eclissi.prg' entry in the Game List table.

Type	Game (Directory / Zip)	Description	ROM Status
Earthquake.prg	Earthquake.prg	Earthquake.prg	1
Earthraid.prg	Earthraid.prg	Earthraid.prg	1
Easy Rider.prg	Easy Rider.prg	Easy Rider.prg	1
Eat Yer Pants.prg	Eat Yer Pants.prg	Eat Yer Pants.prg	1
Eater.prg	Eater.prg	Eater.prg	1
Eclipse.prg	Eclipse.prg	Eclipse.prg	1
Eclissi.prg	Eclissi.prg	Eclissi.prg	1
Eclipse.prg	Eclipse.prg	Eclipse.prg	1
Ectopix.prg	Ectopix.prg	Ectopix.prg	1
Ectoplasm.prg	Ectoplasm.prg	Ectoplasm.prg	1
Edd the Duck!.prg	Edd the Duck!.prg	Edd the Duck!.prg	1
Eddie Kidd Jump Challenge.prg	Eddie Kidd Jump Challenge.prg	Eddie Kidd Jump Challenge.prg	1
Edusystems.prg	Edusystems.prg	Edusystems.prg	1

Got	ROM (File)	Size	Merge	CRC32	SHA1	MD5
	Eclissi.prg	38339 (D)		4d2e5d60 (D)		fb16c6896c9c5e6d5dff855...

Yellow Folder indicates means that there are some missing Files. If we Highlight the Folder it shows 3 Red Icons in this Example and if we Highlight one of the Red Names, it shows us more information on this specific Missing file like the Checksums and the Size. We can now dig in the Internet or Usenet and so on and see if we find another copy of this file. If we found some more files like other Sets, we can copy it into the ToSort Folder and again click Scan ROMs then Find Fixes and the Fix ROMs Button. If you was lucky enough and did put one or more files into the ToSort Directory which did contain the correct Files then RomVault does its Job and Fixes one or more of the missing Files in this Set. If the Set is now complete then you are finished with RomVault, if not...well.. Good Luck on hunting them on the Internet.

If you want more Information on RomVault, take a look at the Homepage from RomVault. There is also a YouTube Video.



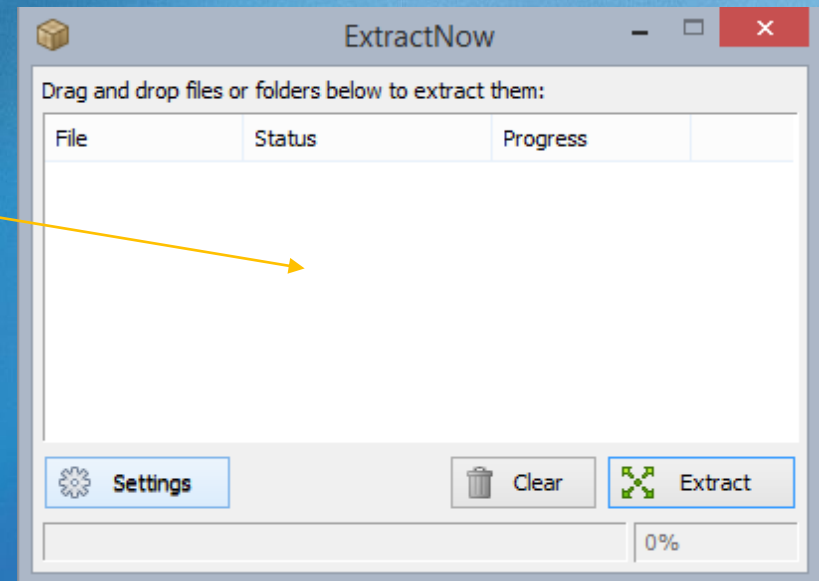
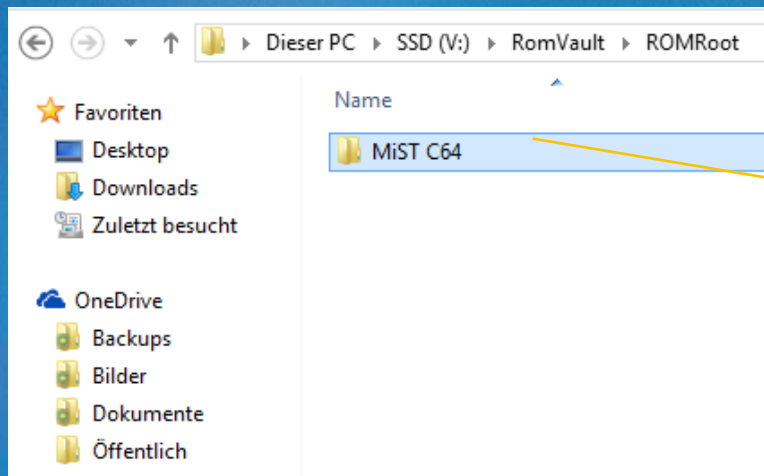
It may happen, that if you look into your ToSort folder that there is a File with the same name that Romvault is missing but did not find it when you try to fix them. This is not a Bug. The Reason for that is that the Checksum doesn't match the one in the Database because it is a bad dump or a clone or did use not the same real-time cruncher or from another crack group and so on. In other Words, RomVault won't fix it because it's an unknown file. Just because a File has the same Name and size does not mean it had the same Content. If only 1 Bit is different in your File, Romvault won't recognize it because the Checksum don't match. Remember this ! If you use the included Save Disks or Save on the Game Disks, it alters the Checksum and no longer compares to the Checksum from the Database. If you copy now your Clean Set with the altered Save games back to the ToSort Directory and try to build clean Set from it, the altered Save game Disk will no longer been recognized from Romvault. If you copy the altered Save game into the correct Folder into the RomRoot Directory and try to build another Set from it...well, say Bye-bye to your Save game and Hello Game, we start from the Beginning. This also happens to every Disk when the Game saves something on it like High scores, Settings and so on even if you don't know it in case of a Virus!

So it's a Good Idea to make a Backup of the Disks that contain Save games, Settings, High scores and such stuff you want to keep. Everything else can be build up again from your Rom collection Backup!

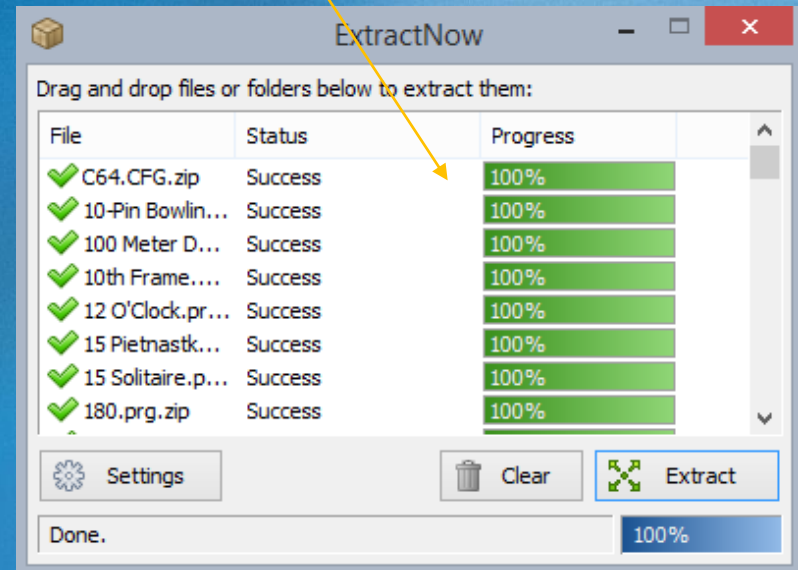
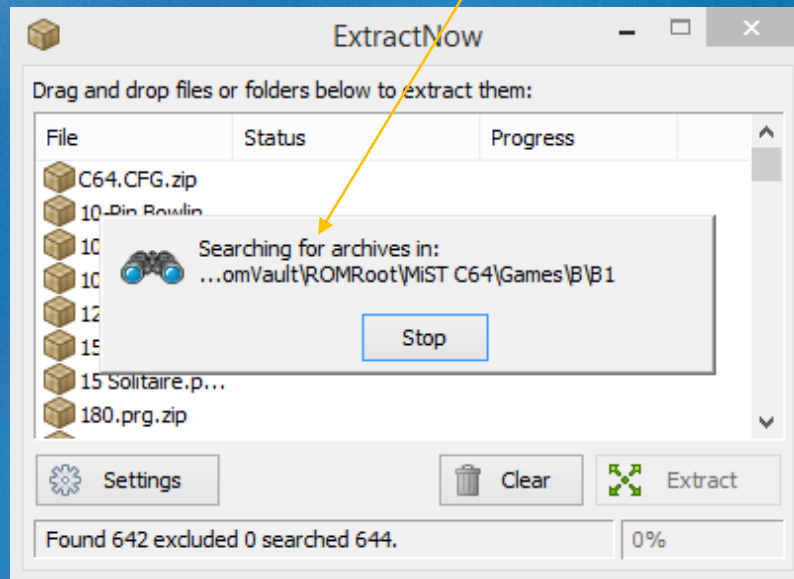
# Last Step – Mass Unzip with ExtractNow

Execute extractnow.exe from the ExtractNow Folder.

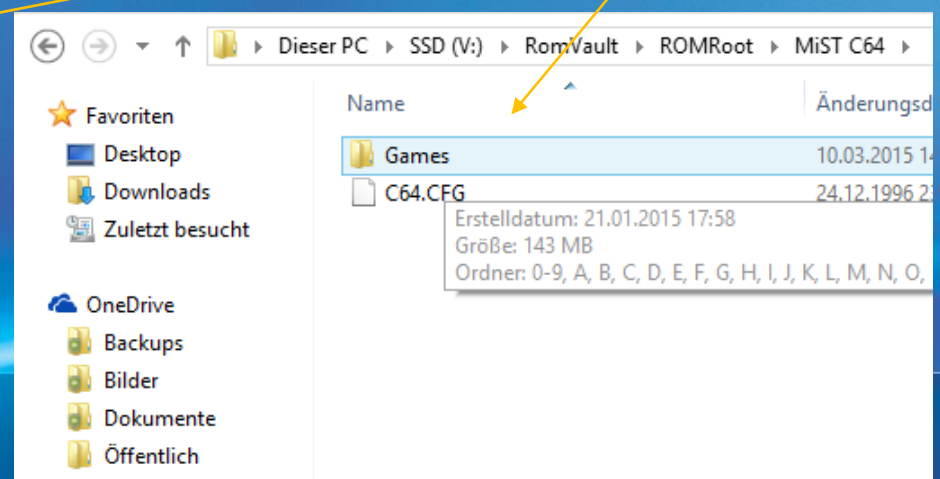
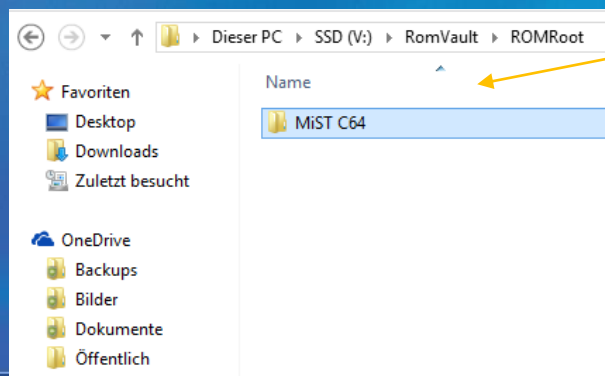
Open the RomRoot Folder which resides inside RomVaults Main Folder. In this Example you find a Folder Inside there called MiST C64. This Folder contains now the freshly created clean Set with lots of Folder, Subfolders and Files which are now all zipped. Simply Drag and Drop the MiST C64 Folder inside ExtractNow's Window.



ExtractNow instantly start to recursively search all Folders for Zip Files and after that it uncompress each found Zip and delete the original Zip.

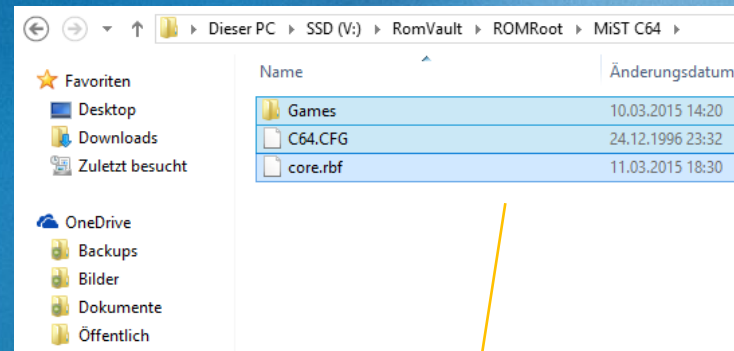
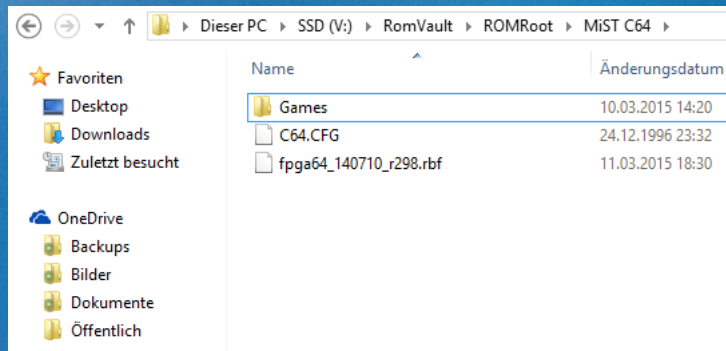


This may take a while depending on the Size of the Collection. Once Finished you can close ExtractNow. Now switch back to the Explorer. The RomRoot Folder contains in my Example a folder called MiST C64. Enter this folder and you find the finished clean set.





Copy the needed core into the same Folder. Rename the core to core.rbf. Now you can Insert your SD Card into your PC and copy the whole Content to the SD Card.



The SD Card is now ready to use with your MiST FGA.



# Cleaning RomRoot and DatRoot Folders

It is now a good Idea to clean RomRoot and DatRoot folder. Simply delete all Content from the RomRoot and DatRoot Folder. The Reason for that is, if we build another Set for another System, RomVault will find the now unzipped Roms in the RomRoot Folder. If we try to fix the other Set, RomVault will again Zip all Files from the previous Set which we unzipped with ExtractNow. While this is not a big Problem, it just takes more time to build the new Set.

## Q & A

Q: Will there be Dats for other Systems too ?

A: Most likely, I am already working on them.

Q: Will there be a Dat for the ZX Spectrum ?

A: Well, to be Honest, I already started this but this will take forever until its finished (over 12800 Images) if I didn't get help from others. I personally love this system. It was my 2<sup>nd</sup> computer after the zx81.

Q: A Dat for Apple ][ ?

A: I already made one which is already cleaned BUT the Disks where only checked for playability in AppleWin emulator. You also need to convert all Apple Disks into the NiB Format. Since the Apple ][ core has no Reset Function to speed up loading other Disks, this is on very low priority because of checking playability for over 3200 Disks on the MiST FPGA.

Q: How about Dats for Atari Computers ?

A: Of Course, they are on high Priority but this takes some Time.

Q: Where do I get the game (Enter Game name here) from ?

A: Umm...you look better what the dog has made in the kitchen...

# Big Thanks go to the following People!

GordonJ for his famous RomVault

Nathan Moinvaziri for his useful Utility ExtractNow

All FPGA Core Developers and the to all who port it to the MiST FPGA

The complete Tosec Team for their hard work

Till Harbaum for creating the MiST FPGA

and of course my wife for your patience while building the Dats

And all I did forgot to mention

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