

PhotoRescue User's Guide

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PhotoRescue : the fair picture recovery solution for Smartmedia, Compact Flash and Memory Stick.

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Foreword

We have tried to make this user manual as small as possible, for your benefit and ours. If you are able to use PhotoRescue and recover your pictures without this manual, this is great news ! If not, please go through these few pages and try a few of the tweaks we suggest.

Good Luck !

PhotoRescue System Requirements

- A 80x86 based system running one of the following operating systems
 - Windows 98
 - Windows 98 SE
 - Windows ME
 - Windows NT SP4 or above
 - Windows 2000
 - Windows XP
- Two to three times as much disk space as the size of the media you are trying to recover.
- A USB media reader, a PC Card media reader, a floppy drive media reader, or eventually a camera that behaves as a USB Mass Storage Device¹.

Recommended Configuration

- A 80x86 based system running Windows 2000
- A USB media reader with up-to-date drivers.

A word about previewing

Previewing recovered JPG files is supported on Windows 2000, Windows ME and Windows XP. If the recovered files are not thumbnailed, chances are that they are not valid graphic files. If that happens

- Try expert mode and tweak the recovery parameters
- Contact us for support

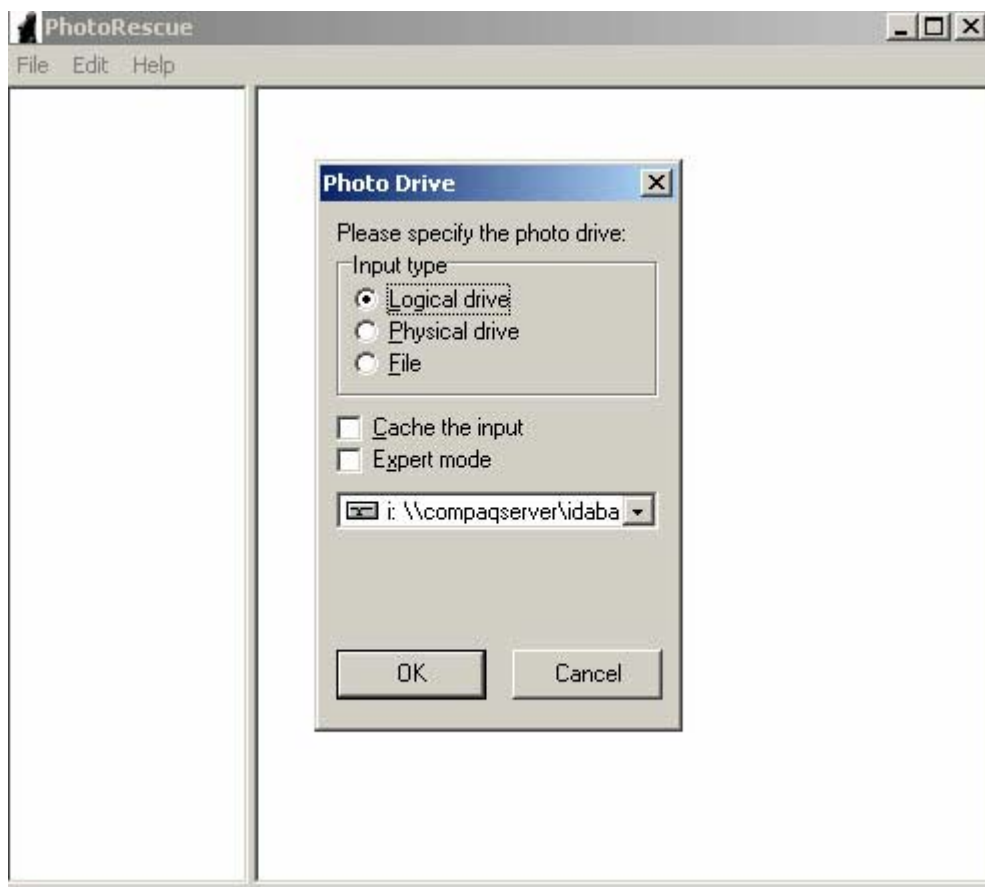
Previewing may work on Windows 98, Windows 98 SE and Windows NT4 systems, depending on the version of the system dlls. If the recovered files are not thumbnailed, they may still be perfectly valid graphic files. If that happens

- Try the recovery on a Windows 2000, Windows ME or Windows XP system.
- Contact us for support.

¹ It seems actual implementation of this feature at the camera level varies a lot from manufacturer to manufacturer : we recommend a stand-alone reader.

Initial Screen

When PhotoRescue starts, it will display the following screen.



Logical Drive : access the media as a normally mounted logical unit. If this option is available for the media you are attempting to recover, we suggest to use it.

Physical Drive: access the media directly, regardless of how it is reported to the system. This option is available on Windows 2000 and Windows NT systems only. This is the best method to use in case of boot sector corruption, severe file system corruption or physical damage to the media.

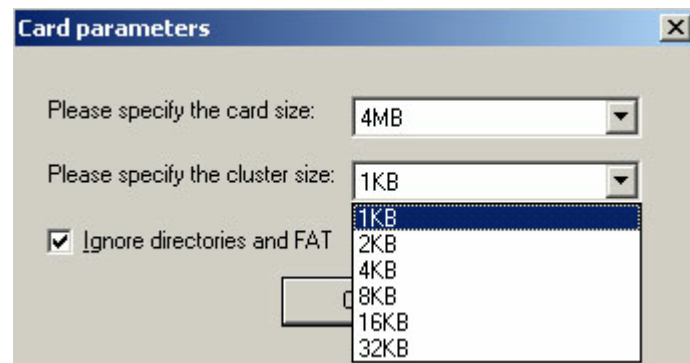
File : access a backup file containing a copy of the media. This option works with our “Image the input” feature, but may also work with media images created by other systems provided they aren’t encrypted or compressed. Use this method to execute PhotoRescue on Mac Intosh created images for example.

Cache the input : this option can be selected to speed up the recovery process. An image of the media is stored in the computer’s memory (RAM) and all recovery operations occur on this media. Please note that your system must have roughly twice as much physical memory as the media you are trying to recover in order to benefit from caching. Caching a 64MB media on a 256MB system will probably speed the recovery but attempting to cache a 128MB media on a 128MB system will take forever.

Expert Mode

Expert Mode : this option gives the user full control over the recovery parameters.

IMPORTANT NOTE : IF YOU ALREADY TRIED OTHER RECOVERY SOFTWARE, CHKDSK OR NORTON UTILITIES AND THEY RECOVERED GARBAGE, YOU MUST USE EXPERT MODE TO IMPROVE ON THE RECOVERY.



The Expert Mode Box essentially serves two purposes

Data Recovery after Norton's Unerase of CHKDSK have written bogus information to the media. In this case, a wrong set of file descriptors have been created and while the file system appears sound, the actual data content of the recovered files is garbled. PhotoRescue must be told to ignore this apparently correct but misleading system information to recover the pictures.

Data Recovery when the card is physically damaged, when the system information is still available but has been modified, or when there is a discrepancy between the detected and the reported media size. In this case, assuming the defaults will usually work but, if it does not, the user may try to set the cluster size to 1KB or 2KB and see the result.

The Status Screen

Recovery of Logical Drive J:	
Analysis	
Reading sector:	539
Directories found:	4
Files found:	3
Crippled files:	
Contiguous files:	
Recovered size:	967,680
Totals	
Total sectors:	8,000
Total clusters:	3,960
Cluster size:	1,024
FAT	12
Root directory size:	512
Total size:	4,096,000

Analysis finished, please click Continue

Continue

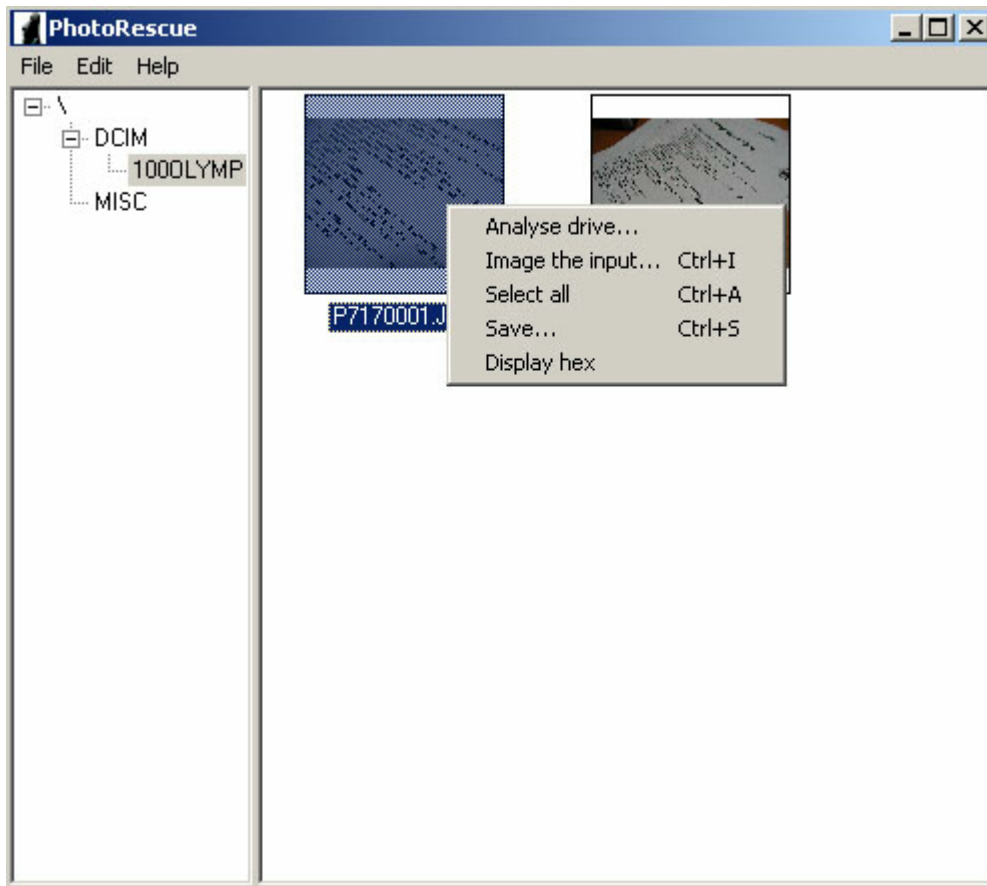
Found FAT copy 1 at sector 1...
Found FAT copy 2 at sector 13...
Found Root Directory at sector 25...
2. Reading existing files...
3. Recovering files using FAT...
4. Recovering directories...
5. Recovering contiguous files...
Analysis finished, please click Continue

This is how a typical recovery looks like. If the directory structure and the file names were still available, they will be used. If not, automatic file names will be generated and used. Physically unreadable sectors will also be enumerated here. The reported information is basically useless to the user but can be helpful if we need to remotely debug a tricky situation.

Recovering the files

When the recovery phase is complete, you will have two options to save the file

- Right-click and Select and Save
- Drag and Drop the Recovered Files



Imaging the Input

This option, also available from the menu, allows the user to create a backup of the media. It is always a good idea to create a backup of the corrupted media for further processing but that is an even better idea if

- The media suffers from physical damage. One never knows what will break on the next run.
- You plan to try other data recovery utilities that may write to the recovered media.



tip - a formatted media may or may not contain data. One easy way to check if the format was a full “zeroing” format or a partial “delete-all” operation is to take an image of the media and try to compress it with Winzip (for example). If the media image compresses very well (typically by 98 or 99%), your data is gone. Any other result indicates that useful data may remain on the card.

Support

PhotoRescue is supported by e-mail.

Support@datarescue.com is the address to use for technical support questions

Sales@datarescue.com is the address to use for commercial questions.

Contact Information

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Profile

DataRescue is a privately held Belgian Corporation established in 1993. Profitable since its inception, DataRescue has established itself as the undisputed leader of the Disassembler market. Its flagship product, the IDA Pro Disassembler, is used by thousands of IT security developers and hundreds of governmental agencies worldwide. Check our IDA Pro homepage at

www.datarescue.com/idabase