



# Performing a Data Recovery with CBL Pro-V Software

These easy-to-follow guidelines will assist you to perform a data recovery with CBL Pro-V software.

There are two versions to choose: CBL Pro-V (FAT) to recover files from FAT-formatted drives or CBL Pro-V for recovering data from NTFS-formatted drives.

**Please Note:** CBL Data Recovery strongly recommends that you **do not** operate your computer, install programs, surf the Internet, or boot from the drive on which you have lost data. Any of these actions can permanently overwrite your lost files that you want to recover. CBL recommends that you remove the drive and attach it to another computer, as recommended below.

## 1 Setup

### *1.1 Configure a Recovery Computer*

Before you begin the recovery:

When the hard drive from which you want to recover data is your Master/Boot-Drive (C:), remove it from your computer and attach it to another system as a slave/second drive. (See **Section 1.2** for further details.)

When a second or external hard drive contains the lost data (Refer to **Section 1.4 External Drives**), proceed immediately to **Section 2, Installation of CBL Pro-V Software**.

If your drive is in a laptop or notebook, refer to **Section 1.3 Notebook or Laptop Drive Removal**.

### *1.2 Remove the hard drive and attach it as a slave drive*

If you have not removed and installed a hard drive before, follow these easy steps.

- a) Shut off your computer.

- b) Unplug the power cable.
- c) Open the computer casing by removing the screws. The hard drive should be connected to the IDE cable and a power cable.
- d) Remove the remaining screws to release the hard drive.
- e) Unplug the drive from the IDE cable and the power cable.
- f) Install the removed hard drive to another computer as the slave drive under one of the following two conditions:
  - 1. Install the removed drive as a slave drive to another functioning computer. Ensure that there is sufficient free space available on the second computer's hard drive for CBL Pro-V to copy the recovered files.
  - 2. Configure the system from which the problem hard drive was removed as the Recovery Computer. Install another functional drive as the Master/Boot drive. Install a Windows operating system on it and make sure it contains enough space to save the recovered data. Attach the "problem" drive as a slave drive.
- g) Configure the drive as a slave drive. Set the pins on the small side of the drive to the correct position as identified on the chart adhered to the drive. Connect the "problem" drive into the second slot on the IDE cable and then into the power cable.
- h) Plug the main power cable in and turn on the Recovery Computer. Determine that the second or slave drive is detected. Using Windows Disk Management, click **Start>Control Panel>Administrative Tools>Computer Management>Storage>Disk Management**.

If the second or slave drive is not detected, the drive is either installed incorrectly or physically damaged. Check the cables and make sure the drive is jumper or configured as a slave drive.

If you know or suspect that the drive is damaged, send it to a CBL Data Recovery laboratory for a free evaluation. (Refer to [www.cbltech.com/company/labs.html](http://www.cbltech.com/company/labs.html).)

### **1.3 Notebook or Laptop Drive Removal**

If you need to recover data from a notebook or laptop drive, configure it as a slave drive by following these simple steps:

- 1) Turn the laptop off.
- 2) Remove the hard drive from your mobile computer. Consult the User Manual.
- 3) Connect the removed hard drive to an IDE adaptor.
- 4) Connect the IDE adaptor to the IDE cable of a desktop computer running any Windows operating system.

## 1.4 External Drives

CBL Pro-V software can recover data from external drives such as Universal Serial Bus (USB) drives. However, a USB recovery can take a significant longer time through USB1. A scan of a 100GB drive which takes 2 hours may take an estimated 20 hours via USB. It is more expedient to attach the drive directly to the IDE cable of the computer.

## 2 Installation of CBL Pro-V Software

If your Recovery Computer is configured, you are ready to download the free trial edition of CBL Pro-V software from <http://www.cbltech.com/data-recovery/software/pro-v/downloads.html> and install CBL Pro-V on the Master/Boot (C:) drive of your Recovery Computer.

There are two versions of the data recovery software to try before deciding to purchase a license key: CBL Pro-V recovers data from NTFS-formatted drives and CBL Pro-V (FAT) recovers data from FAT-formatted drives.

The file system on your "problem" drive will most likely be FAT, if the operating system on your "problem" drive is Windows 95, 98, Me, or you have a Compact Flash Card, USB-Stick, an unformatted external drive, or a floppy disk. Your choice of data recovery software would then be CBL Pro-V (FAT).

However, you will require CBL Pro-V, if the operating system is Windows NT, 2000, XP or Vista as the file system is likely to be NTFS.

**Note: Microsoft XP does use both FAT or NTFS file systems. The majority of drives larger than 32 GB are NTFS formatted.**

If you initially download CBL Pro-V (for NTFS-formatted drives) and the scan of your drive does not identify any useful file system entries, you can simply download and try the trial edition of CBL Pro-V (FAT) before purchasing a license key to complete the recovery.

## 3 Running CBL Pro-V Software

### 3.1 Start

Click on **Start>All Programs>CBL Pro-V**.

### 3.2 Welcome Screen

The first screen that you will view will look like this:

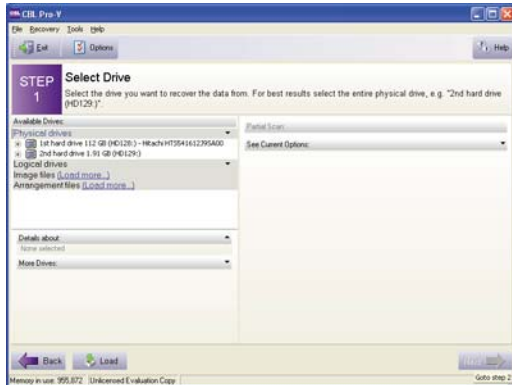
To optimize the recovery, select the data loss situation that best applies to your situation.

If in doubt, select the standard options which are the recommended settings for most data recoveries.

Press Next.



## 3.3 Step 1 - Select Drive



On the left side of the **Step 1 – Select Drive** screen, a list of the drives that are accessible in your system appears.

Select your "problem" drive from the list.

If the “problem” drive was attached as a slave drive as detailed above, it will be "2nd Hard Drive (HD129:)". If there was more than one hard drive already in the system, it could be the 3<sup>rd</sup> or 4th drive listed. It should not appear as "1st Hard Drive (HD128:)" as this would indicate that the drive you want to recover is still configured as the boot drive.

Select the drive to recover under **Physical Drives, NOT Logical Drives** to obtain the best results.

Refrain from changing settings in Partial Scan. This feature is for experts only and will not improve your recovery results.

Press Next.

### 3.3.1 Scan the Drive

CBL Pro-V software will scan your drive for available information regarding the original file system. Allow a minimum of 60 minutes for every 50 GB of drive capacity.

If the scan takes longer to complete or stalls, this is an indication that in all likelihood there is something wrong with your drive.

A scan can take an extended period of time because:

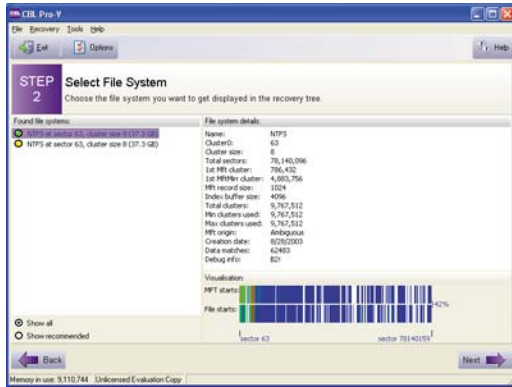
- 1) The drive has a physical problem.
- 2) The drive has numerous bad sectors or damaged areas on its platters that cannot be read or will take longer to read.
- 3) Occasional bad sector messages are generated and display warning windows which delay the scan. You can select "Ignore" and the scan will continue.

However, if the scan appears to stall and is progressing extremely slow or numerous read error messages are received, it is recommended that you stop and make an image of your damaged drive first using CBL Pro-V. The data recovery can be performed for the image rather than for the drive. Simply select the Image made. You will need sufficient space on another drive to store the Image. Please see the help contents for instructions on creating an image file.

- 4) The scan of an external drive is being conducted via the USB or USB1 port. Refer to **Section 1.4 External Drives**.

## 3.4 Step 2 - Select File System

In Step 2 – Select File System, you will see:



CBL Pro-V software displays a list of the possible file system(s) entries found on the left side of the screen. Don't confuse this list with the list of files and folders that you hope to recover. That list will be presented to you in **Section 3.5, Step 3 – Recovery Tree**.

Each entry represents a (possible) partition on the drive. If you have more than one partition on the drive that you need to recover (i.e., logical drives C:\ and D:\), then you will probably have to perform Steps 2 and 3 and select the corresponding entries separately in order to recover all files.

**Note: If you have both FAT and NTFS partitions to recover on the drive, then you must run both CBL Pro-V (FAT) first and then CBL Pro-V or vice versa.**

The file system entries are constructed by file system information that CBL Pro-V collects during the scan. This information is used to reconstruct the file system originally on the drive as well as the required information about file location and content. By default the most accurate file system entry is on top of the list so when you expand the list by selecting “Show all”, do not be concerned about the other entries or the entries which are displayed.

A detailed description of the found file system is displayed on the right. This information is primarily used by the CBL tech-support staff.

Select the first entry in the list and press Next.

### 3.4.1 No entries in Step 2 – Select File System

If no entries are visible in **Step 2 – Select File System**, the following may have occurred:

- 1) The **whole physical drive** in **Step 1 – Select Drive** was not selected.

If only part of the drive, a partition or a partial scan was conducted by restricting the area to be scanned by doing only a partial scan, CBL Pro-V might not be able to reconstruct the original file system. There may be insufficient information located to rebuild the file system.

- 2) The **wrong version** of the software was used.

CBL Pro-V software comes in two versions. You'll need CBL Pro-V (FAT) if the original file system on the drive when you lost your files was FAT or CBL Pro-V if the original file system was NTFS. If you are not certain about which file system format, refer to **Section 2, "Installation of CBL Pro-V Software."**

Members of CBL's technical staff are available to determine if you are using the wrong version. You can create a snapshot of your recovery by clicking on **Help>Snapshot for Support** while in **Step 2 – Select File System**. This will create a small text file with detailed information about the software options you chose that you can email to [support-prov@cbltech.com](mailto:support-prov@cbltech.com).

3) The drive is **physically damaged**.

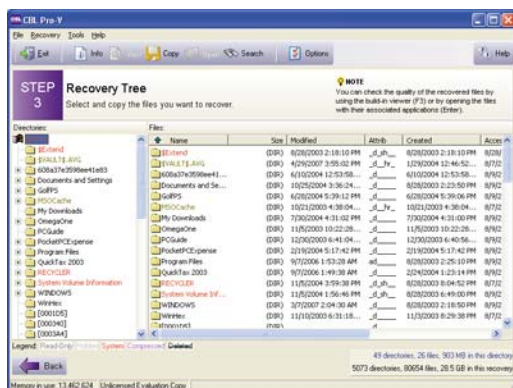
CBL Pro-V is unable to read enough sectors on the drive to gather the required information. You can elect to send your drive to CBL for a free evaluation. Email CBL technical support for assistance at [support-prov@cbltech.com](mailto:support-prov@cbltech.com). CBL can help you determine if this is the case.

4) You are scanning an **external drive**.

Since error checking is not available during scans via USB, possible errors are not reported to CBL Pro-V while the external drive is read. The software may not be able to read the necessary file system information and collect enough information to create a file system entry. It is recommended that the external drive is attached directly to the internal IDE cable. Scans are normally completed much quicker this way. Please refer to **Section 1.4 External Drives**.

### 3.5 Step 3 - Recovery Tree

The screen resembles Windows Explorer. On the left side of the screen is a tree of recovered Directories, folders and a folder called "Lost files" created by CBL Pro-V software. "Lost files" contains the files without directory information.



When you open a folder listed on the left side, the files in this folder are displayed on the right side.

Review the directory tree on the left side.

Does it look familiar? Are the folders containing the data to be recovered there? Is the directory structure complete for this partition?

Open up a folder on the left side and look on the right side. Do you see the files that you expect to be in this folder? Does it appear that the files are all there? Do you see the correct file names?

Open a few files to test that the files' contents are there and that those files will be usable.

Select files such as Word documents (\*.doc), pictures (\*.jpg), graphics (\*.gif) which are easy to check.

Open the file by double-clicking it or using the build-in file viewer (F3).

**Note: To open a file by double-clicking, the associated application must be installed on the Recovery Computer.**

You will not be able to test large files or files which must be imported into their native applications such as Outlook PST-files.

Do the files open? Can you see the contents of the file? If so, open several files in different folders. If the majority of the files open okay, the recovery is proceeding well.

To save the recovered files, the files must be copied from the "bad" drive to another location. This can be a location on the Recovery Computer's Master drive, any other drive attached to this computer, a USB drive or a network destination. This location must have enough free space for all the files you need.

**Note: NEVER copy the recovered files back to a location on the "bad drive" or you will overwrite them and they will be unrecoverable or permanently lost!**

Copy individual files and folders by selecting them on the right side or you can select the whole list by selecting the top entry on the left side that says [FAT] or [NTFS]. Select the files/folders/volume you need and press the copy button or **Recovery>Copy** on the main menu.

You will need a license key for the software to enable the copy function and to save your files. A license key may be purchased online 24 hours a day at [www.cbltech.com/data-recovery/software/pro-v/register/](http://www.cbltech.com/data-recovery/software/pro-v/register/). The license key will be displayed on a confirmation screen after submitting the order form and you will also receive an email.

You do not have to run the software again. Enter the license key at any time in the trial edition of CBL Pro-V. Go to **Help>Register** in the main menu of the software and enter your registration name and license key there.

Begin to copy your files.

Once completed, confirm that all the files are on the destination drive. The length of time required to copy files can vary depending on the size of the files and the speed of the computer or network connection.

Do not recycle or format your "bad" drive or reinstall a new operating system. Keep the drive in its current state until you're confident that you have successfully salvaged all the data you need.

Only once you have successfully recovered your files, should you should determine whether you want to rebuild your system on this drive, reformat the hard drive, reinstall Windows and other applications, and copy back the recovered data to this drive.

**NEVER REUSE A DRIVE THAT HAS PHYSICAL PROBLEMS, BAD SECTORS OR THE REASON THAT THE DATA IS INACCESSIBLE IS UNKNOWN.**

## 4 Problems and Troubleshooting

### 1) You don't see your files and folders in Step 3 – Recovery Tree.

If you don't see your files or only part of them, immediately go back to **Step 2 – Select File System**. Individually, try the other file system entries if there are present. If you still cannot find your data, send us a snapshot of your recovery along with a short description of what happened to the drive. Create a snapshot by clicking on **Help>Snapshot for Support** while in **Step 3 – Recovery Tree**. This will create a small text file with detailed information about the options you chose in the software. Email this file to [support-prov@cbltech.com](mailto:support-prov@cbltech.com).

### 2) You only see on the left side a list of numbered directories, but no or small directories with real names.

The directory structure of the drive could not be recovered. That doesn't automatically mean that the files and file names are unrecoverable. The subdirectory names within the directories and file names may be intact and the files should open.

You may also go back to **Step 2 – Select File System** and try other file system entries or send us a snapshot of your recovery as described in the previous point.

### 3) You see files and folders, but the specific file(s) you want is not there.

Search for your files. They may be hidden in another directory where you wouldn't expect them. To search for files, click on the Search button and enter the file name, part of the file name or the file's extension into the search mask. If you're still unable to locate the missing file, go back to **Step 2 – Select File System** and try other entries or send us a snapshot of your recovery (see above).

### 4) Your file won't open or you only see weird hex characters instead of your file content.

Return to **Step 2 – Select File System** and try other file system entries. If that doesn't help, send a snapshot of your recovery from **Step 3 – Recovery Tree** (see above) to [support-prov@cbltech.com](mailto:support-prov@cbltech.com).

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# **CBL Data Recovery Technologies Inc.**

*Recovering Data around the Globe*

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