

# **TFtool**

**Version 0.9**

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# Overview

**TFtool** is a program to read and write from/to HDDs of the sat-receivers **TF 4000** and **TF 5x00** from Topfield™

**TFtool** works under **Win 9x/Me** and **Win NT/2000/XP**. Under Win9x/Me accessible HDD size is limited to 128 GB.

## Features:

- easy [copying](#) of files by **Drag&Drop** between Topfield-HDD and PC in both directions
- **direct copy between two Topfield-HDDs**
- [delete Files](#)
- [rename files](#) incl. event name, event description und service name
- [Split function](#) for large files with auto-merge when retransferring the files ( => 4GB copies with FAT32 possible)
- [Video preview](#) with simple playing function (only video, no sound), single step, fast Foreward, fullscreen, screenshot and free access
- Automatic Backup of FAT- and directoryinformation
- [Manual Backup of FAT](#) and directoryinformation
- Repair of FAT-errors (free unreachable [cluster](#))
- [Repair](#) of XP-signed drives
- [restore FAT-Backups](#) with **test function for security of system discs**
- cut off file begin and end ([trim function](#))
- [Connection to ProjectX](#) through a special RawRead.dll

**Attention:** Please note that this software can write directly on the harddiscs, and that you can loose your data when you handle wrong (FAT restore). In addition the program is in beta stage. I dont take any warranty (see [GPL remark](#))!

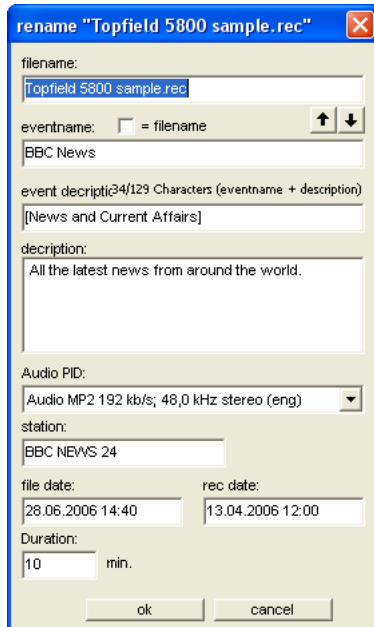
**Also to note:** to access the Topfield-HDD, it is nessesary to dismount it from the receiver and connect it to your PC, resulting in a loss of warranty. Beware of high voltage in the receiver!!!

# 1 menu

## 1.1 file

### 1.1.1 rename file

To rename a file, it has to be selected in the filelist. If more then one file is selected, this function is disabled [v0.8].



**filename:** the name of a recording is entered without extension on a TF4000 drive and with the extension *\*.tts* / *\*.raw* in a PC folder. On a TF5x00 the extension of recordings is *\*.rec*.

The following fields are only available for recording files:

**title:** On Topfield drives, this is mostly equal to the filename. While playback on a Topfield receiver, it is shown by pressing the *info* button.

= **filename:** if checked, filename and title are set to equal.



With this two buttons the filename can be copied to the title and vice versa.

**Subtitle:** e.g. used in series, but often left empty. Attention: title and subtitle together have a maximum length of 128 characters!

**Description:** Since the TF5000 the [Recording-Header](#) contains an extended description, coming from the EPG.

**Audio-PID:** If a recording has more than one audio streams, you can select the default stream here.

**Station:** Here you can change the name of the station (max. 23 characters).

**File date:** changes the filedate.

**Recording date:** changes the recording date.

**Duration:** change the duration value, if its incorrect.

see also: [Popup menu of the filelist rename \(auto\)](#)

## 1.1.2 rename (auto)

[v0.9]

In this function, TFtool tries to find the title of a recording in the teletext pages 333 and 100. The scan starts not at the beginning of the file, but at a given position (default 20%) to find the real title, not the title of the program before. The percent value of the scan position can be set in [Options->Files](#).

After this the well known "rename" dialog appears with the found title as suggestion. If no title can be found in the teletext, the dialog shows the original filename.

see also: [rename Options->Files](#)

## 1.1.3 delete file

Deletes all files, which are selected in the filelist

see also: [Popup menu of the filelist](#)

## 1.1.4 save file as

This function can only be used for copies to PC. It is only available, if exactly one file is selected in the filelist. With a click on *save file as* you get the Windows save dialog to select the filename and the target folder. You can set the file format with the file extension (\*.raw or \*.tts for TF4000; \*.rec for TF5x00 sat, cable, terrestrial (headers of german models) and TF5800 for the UK Version).

For copies of multiple files see *copy by drag&drop* in [filelist](#)

see also: [Popup menu of the filelist](#)

## 1.1.5 trim file

With the trim funktion you can cut off the beginning and/or the end of a film. TFtool will create a shortened copy of the file. If you activate the trim funktion, new control elements are displayed below the preview window:



**activate trimming:** select the menuitem *trim file* in the main menu under files or in the popup menu of the filelist (rightclick). It is only possible to set TFtool into trim mode, if exactly one file is selected.

**Controls:** from left to right the following functions are shown: *one GOP back, fast backward in GOP-steps, stop, pause, fast foreward in GOP-steps* and *one GOP foreward*. With { you can mark the start of the film and with } its end. Also you can use the trackbar for positioning. **Attention:** The startpoint is the first GOP which will be copied, the endpoint is the first GOP, which will be cut off! Except: If the very first GOP is marked as startpoint, the file begin will not be changed. Same for the endpoint at the fileend (Note: you can't reach the last GOP with the trackbar => use the fast foreward at the end).

**Info:** If both markers are blue, a valid cutrange is defined, else the markers are red. If you move the mousepointer over a marker, you can see the timestamp of the cutpoint and with a click on a marker you can jump to the scene.

**Copy:** When you have defined the cutrange you can **copy** the filepart by drag&drop the file entry in the file list to any drive/folder in the drives treeview. This can also be the folder of the source file, because "-trim[nr]" is added to the filename. Or use the *Copy to PC* (save as) function in the main or popup menu

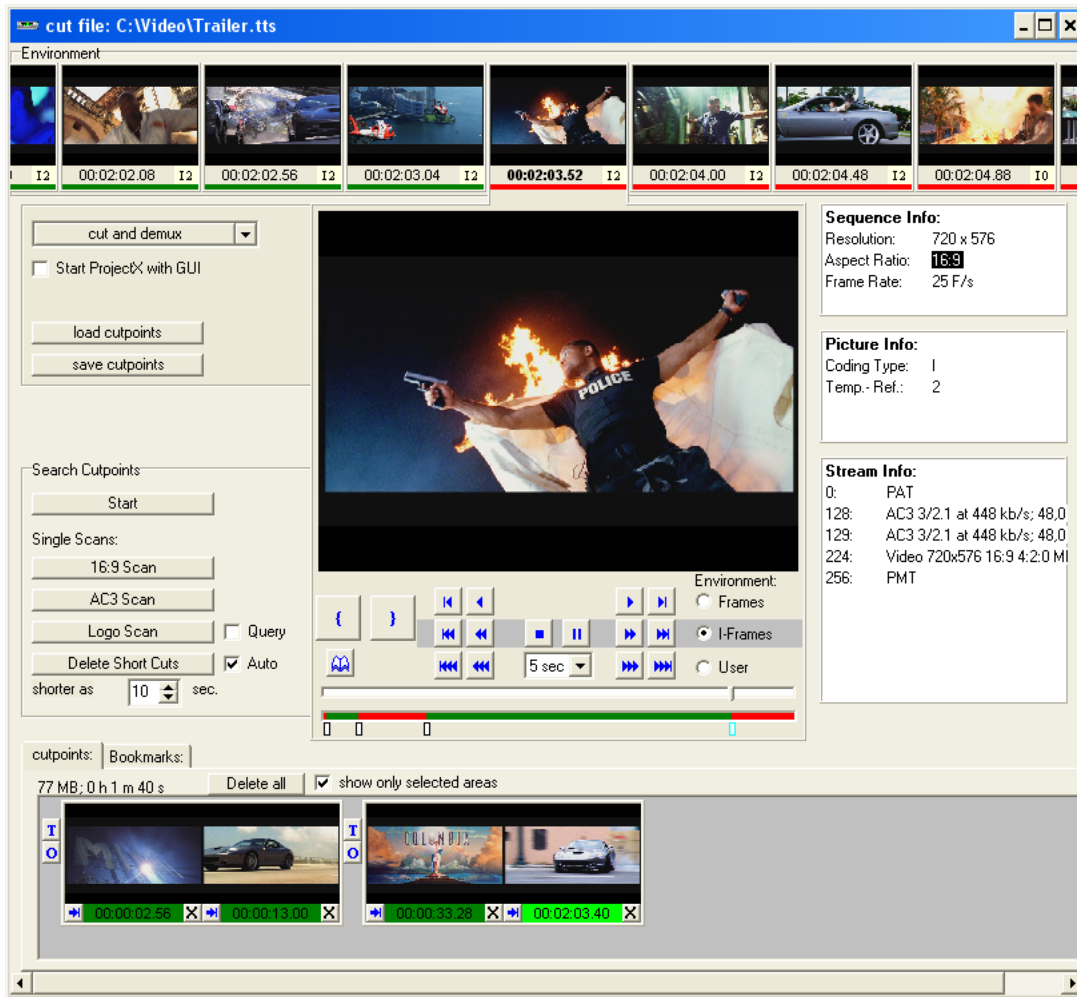
**cancel trimming:** with the button *cancel trimming* or by removing the tick from the menuitem *trim file* you can shut the trim-mode. It ends also, if you select a second file or change the folder.

see also: [Popup menu of the filelist](#)

## 1.1.6 cutting

(since version 0.9)

If you have insalled the [ProjectX connection](#) in TFtool, you can prepare the cut points for the cutting function of ProjectX with this window. With this, it is possible, to cut and demux a video direct from the Topfield drive in one step.



see also: [ProjectX connection](#), [options ProjectX](#)

## 1.1.7 ProjectX

If the [ProjectX connection](#) is working, you have several options

**demux:** starts the demultiplex process of ProjectX without graphical user interface.

**demux as 1 coll.:** if more than one file is selected, ProjectX use them as one collection.

**toTS (TF4000):** ProjectX produces a transport stream (TS) with a TF4000 [Recording Header](#)

**toTS (TF5000):** ProjectX produces a transport stream (TS) with a TF5x00 [Recording Header](#)

If you want to start ProjectX with graphical user interface, select **show GUI** first. Then you can change all options in ProjectX.

see also: [ProjectX connection](#)

## 1.1.8 Multiplex

If you have installed the "bin" package, you can multiplex one or more elementary streams (ES-Streams, e.g. m2v, mp2, ac3) , selected in the filelist, to a Mpeg2 (\*.mpg) file.



## 1.1.9 AC3->MP2

If you have installed the "bin" package, you can convert a selected AC3 file to a MP2 file.

## 1.2 view

### 1.2.1 view Log file

The menu item **view log file** shows the log of the current session with the program entered in options->log. It is primary used to analyse errors.

At every start of TFtool, it creates a new log file. This is for error analyses.

see also: [log options](#)

### 1.2.2 view filelist

The menu item **view filelist** writes the current displayed filelist to a textfile and opens it with the program entered in options->log. E.g. to print it.

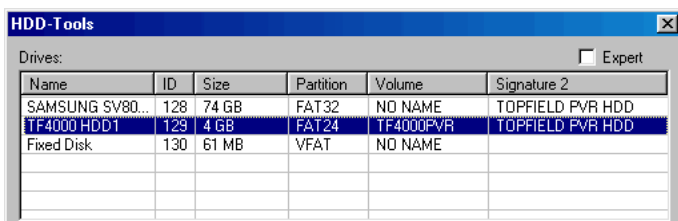
see also: [log options](#)

## 1.3 Extras

### 1.3.1 HDD Tools

#### 1.3.1.1 HDD Tools drives

In this window you can find functions for backup, reconstruction and format of Topfield-HDDs.



The screenshot shows a window titled "HDD-T tools" with a table of detected drives. The table has columns for Name, ID, Size, Partition, Volume, and Signature 2. There are three rows of data: SAMSUNG SV80..., TF4000 HDD1, and Fixed Disk. The TF4000 HDD1 row is highlighted in blue.

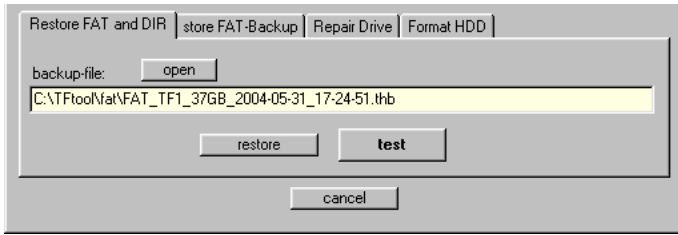
Name	ID	Size	Partition	Volume	Signature 2
SAMSUNG SV80...	128	74 GB	FAT32	NO NAME	TOPFIELD PVR HDD
TF4000 HDD1	129	4 GB	FAT24	TF4000PVR	TOPFIELD PVR HDD
Fixed Disk	130	61 MB	VFAT	NO NAME	

**Drives:** all HDDs found by TFtool are listed here. If a Harddisk is not recognized as a Topfield HDD, you can see in the columns *Partition* and *Volume*, how this drive is formatted (also a view in the log can help with ambiguity). The first HDD in the list mostly contains the Windows system (C:, D: etc.). Be careful to choose the right drive! In the column *Signature 2* you can see, whether a disk was a former Topfield-Drive.

see also: [restore FAT](#), [backup FAT](#), [repair drive](#), [format drive](#).

#### 1.3.1.2 restore FAT

Some of the Problems with the Topfield-HDD (e.g. inadvertently deleted file) can sometimes be repaired by writing back an older FAT & Dir Backup:



**load backup file:** the backups, which TFtool creates at startup, can be found below the TFtool directory in *fat*.

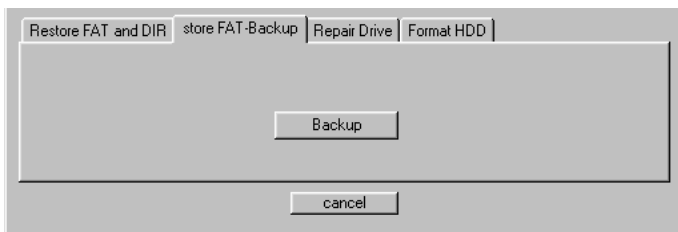
**simulate:** in order to prevent that a Backup is written on a wrong drive, with this function, it is possible it to test whether FAT Backup and HDD fits together. In the main window in the drive treeview a new drive with the name *test drive* is inserted, which refers its FAT and directory information from the backup file, while content is read from the selected HDD and write functions were disabled. Thus it can be clarified whether writing of the selected backup to the HDD makes sense at all.

**restore:** Only if it is absolutely safe that the selected drive is intended for the Topfield-Receiver, one should write the Backup on the disk!

see also: [HDDtools drives](#)

### 1.3.1.3 manual Fat backup

TFtool creates a backup of the FAT and all directories of all found Topfield Drives. If you want to create a manual backup, e. g. after some changes on the disc, you can use this function. If a drive is not recognized as a Topfield HDD, you can backup the first part of the drive, which should contain the FAT and the most important directories (min. the first 5MB).

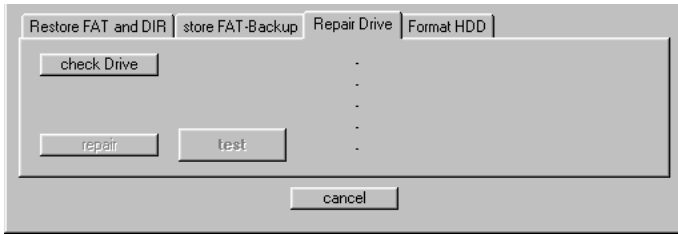


After a click on *Backup* the Windows-save dialog appears. There you can select the filename and the target folder of the backup file.

see also: [HDDtools drives](#)

### 1.3.1.4 repair drive

If the Topfield receiver can't recognize his drive anymore and wants to format it, mostly only parts at the beginning of the disc are overwritten with corrupted data. A recent cause is the signature, which WinXP wants to write on a drive with unknown format. This function tries to reconstruct the lost data.



First of all you must test with **check drive**, whether data for reconstruction can be found. Therby, Tftool searches for a copy of the boot sector, a copy of the first sektor of the root directory and for the root directory itself.

If the root directory is found, a reconstruction semms to be possible and the buttons **repaire and test are activated**.

**simulate:** Like in [restore FAT](#) you can check **without risk**, whether teh reconstruction cab be succesful. Tftool creates a file, which only contains the reconstructed sectors, and imports it like a FAT backup, but dont write it to the TF drive. The FAT itself is not changed by this. So it is possible, that one of the two FAT tables, which normaly are identical, is also corrupted. Then you maybe get the question, which one should be used. Only, if there is no error message, or the message *the FAT contains repairable errors* appears, you should use the repair function. Otherwise, you can save found files in *readonly* mode to PC.

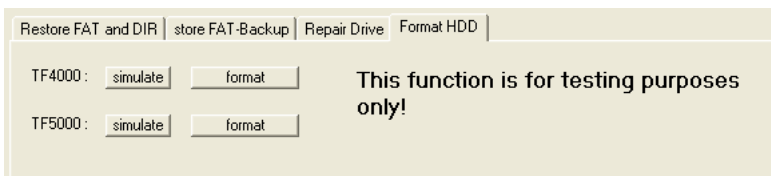
**repair:** Only if the test above was succesful, you should write the reconstruction to the disc! Choose the same FAT as in the test, if asked for.

see also: [HDDtools drives](#), [restore FAT](#)

### 1.3.1.5 format drive

Here you can format drives for the TF4000 or the TF5x00.

USE IT FOR TEST PURPOSES ONLY!



The simulate functions here are only to check the working of the formating (devellopment).

Also the format function creates a file, which is imported as a backup.

see also: [HDDtools drives](#), [restore FAT](#)

## 1.3.2 Recover deleted files

### 1.3.2.1 Recover deleted files

This function always uses the current selected Topfield drive of the [drives treeview](#). If no valid Topfield drive is selected, this menuitem is disabled.

This action may take a while, but can be canceled at every time. After this, all recovered files/fileparts rests temporary in the folder "\_\_RECYCLE\_\_". Temporary means, that the allocations were not written back to the drive yet. To recover them permanently, they have to be moved to another folder on the drive, or copied to the PC. If th progress was canceled, all at this time reconstructed fileparts are available.

This function searches valid [Recording Header](#) in all free [clusters](#) of the disc. Cluster without valid Recording Header, are appended to corresponding files, until a stream error occurs. So, you can reconstruct whole files, or the beginning parts of it.. If the files are already cut on the receiver, only the reconstruction to the first cutpoint is possible.

Files, deleted on the receiver can be overwritte by another recording, or by the timeshift buffer, so they can't be reconstructed anymore.

see also: [move /copy files](#)

## 1.3.3 Test (Testfunctions)

### 1.3.3.1 Play Performance Test

This test plays 250 frames of the selected film in preview as fast as possible without care of framerate. Then the resulting framerate is displayed in a message box.

### 1.3.3.2 FF Performance Test

This test plays 250 i-frames of the selected film in preview as fast as possible without care of framerate. Then the resulting framerate is displayed in a message box.

### 1.3.3.3 export filestart

Here you can export the first kilobytes of a recording for error analyse.

## 1.3.4 start ProjectX

### 1.3.4.1 start ProjectX

Here you can start ProjectX with GUI and X.ini. TFtool serves PX the files of the current selected directory, available with the >>> button. Changes of the PX properties are stored in the X.ini.

see also: [ProjectX connection](#), [options ProjectX](#)

## 1.3.5 Patch Header

### 1.3.5.1 Patch Header

Here you can convert a recording to another Topfield format or to a Transport Stream.

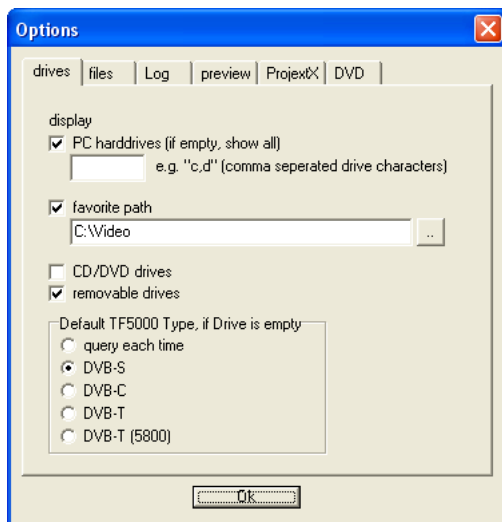
It overwrites the beginning of the file (=>patch).

If the new header is longer than the old one (e.g. TF4000 -> TF5000), the beginning of the stream is overwritten, but this has no effect, because you lose max. half a second in worst case.

If the new header is shorter than the old one (z.B. TF5000 -> TF4000), the unused part is filled with padding packets. (same at Patch to TS)

## 1.4 Options

### 1.4.1 Options drives



**PC-Drives:** Here you can specify whether and if, which PC drives/partitions are shown in the drives treeview of the main window. If only certain HDDs should be shown, you can enter their drive letters in the text field (comma separated). If the text field is set empty, all found HDDs are shown.

**Favorite Path:** Here you can define a preferential directory for the videos. The tick decides again on visibility.

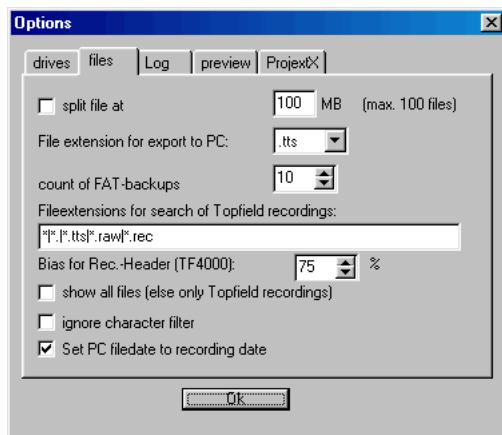
**CD/DVD-Drives:** selects, whether found CD or DVD-Drives are visible in the drives treeview (only works, if a medium is inserted).

**removable drives:** e.g. USB sticks, flash cards in card reader etc.

**default TF5000 type, if drive is empty:** because of TFtool adapts the [Recording Header](#) automatically while writing to a Topfield drive, it is necessary that the program knows, which type of receiver it is writing to. If there is no recording in the datafiles folder, this can't be found out. Here you can set, which type TFtool uses.

see also: [drives tree](#)

## 1.4.2 Options files



**split:** especially for FAT32-formated disks/partitions, which do not permit files greater than 4GB. Actually already files  $\geq 2$ GB are problematic for Win9x/ME, because they cannot be copied with the Windows Explorer. This function splits the files automatically when copying on the PC into several files. First receives the extension tts, the further tts1, tts2... In the file list of the main window split files are shown, as if they would be a complete file. While copying them back from the PC to a Topfield disk, they are automatically joined again.

**File-Extension for copys to the PC (TF4000):** you can choose between .tts und .raw, the content stays the same (1:1 copy).

**Count of FAT-Backups:** With every start of TFtool, Backups of the FAT and the directory are created of all found TF Disks (in directory *fat* below the TFtool directory). Here you can define, how many Backups should remain on the HDD (default: the last 10).

**max. length of TF filenames:** here can be set the maximum length (without extension) of a filename on an TF drive after rename (default: 64 characters).

**show all files:** if checked, all files of the current directory are shown in the filelist, otherwise only found Topfield recordings are displayed.

**ignore character filter:** the Topfield takes filenames, subtitles, station names etc., out of the EPG. They sometimes contain some special characters, which TFtool filters by default. This can be switched off here. Characters, which are not aloud in Windows filenames are always filtered, independently of this property.

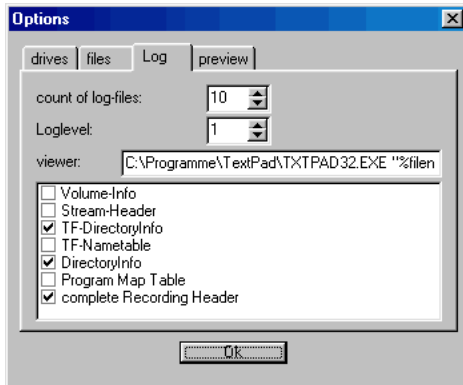
**Set PC filedate to recording date:** when copying a file to PC, normaly the file gets the actual date. If you tick this, the filedate is set to the recording date.

**Scan position for auto rename:** sets the file position in percent, where TFtool scans for the real title of a recording. [v0.9.0.7] ->[rename \(auto\)](#)

**Bias (Threshold) for Rec. header:** TFtool tries to recognize Topfield recordings by the *Recording header*. This is scanned thereby for certain characteristics. Since not in each recording all characteristics are recognizable, with exceeding this threshold it is accepted as a valid header. (if the file has the ending \*.tts, a valid header is proceeded immediately)

### 1.4.3 Options Log

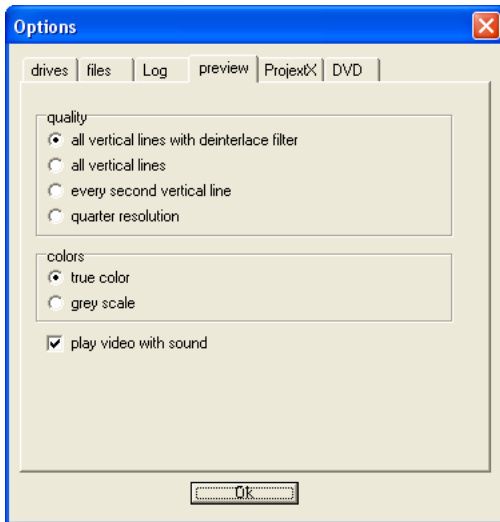
TFtool creates a new log file at every start. In this tabsheet you can adjust, how many log files should remain on the disk and how detailed the Logs are noted (log level). I expect you to stay at level 1.



You can individually switch on and off some of the log functions in the check-list. Entries with *bigfile* can create very big logs and can decrease performance.

see also: [view log](#)

### 1.4.4 Options preview



#### Quality:

**full vertical resolution with deinterlace-filter:** best picture, but most computing amount.

**full vertical resolution:** means, that all lines of a frame are used in the preview.

**half vertical resolution:** only every second line is used. Faster and sometimes better with interlaced material.

**quarter resolution:** only every second row and column is used to produce the picture (fastest)

#### Colors:

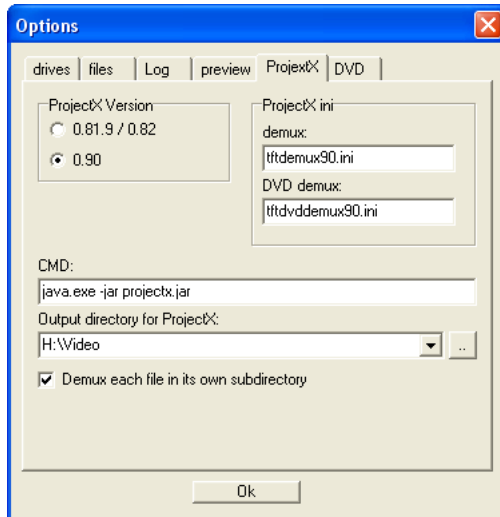
**True Color:** true color preview.

**Grey Scale:** "black and white" (faster).

## Sound

preview with or without sound.

## 1.4.5 Options ProjectX



**ProjectX Version:** Adapt to your Version. By now everyone should use the 0.90.x.

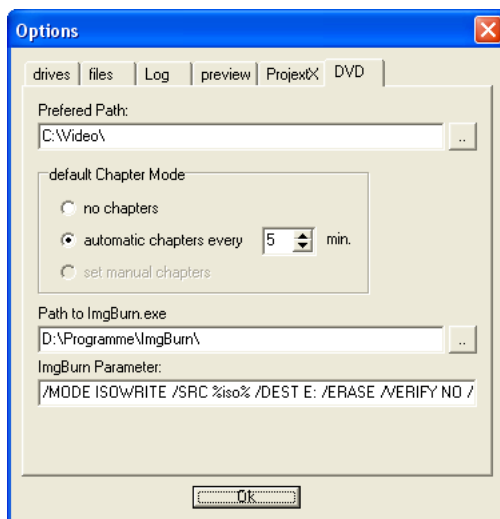
**ProjectX ini:** here you can set the ini files for several functions. This means also, you can use your own ini e.g. fo demultiplex.

**Output directory for ProjectX:** is not valid for Extras->ProjectX. This folder is given to ProjectX for demultiplex as output directory.

**Demux each file in its own subdirectory:** is not valid for Extras->ProjectX. If checked, every demux run has its own folder below the output directory, named like the source file.

see also: [ProjectX connection](#)

## 1.4.6 Options DVD





Here you can set the preferences for DVD projects.

**preferred path:** starting point for the path selection at the beginning of a DVD-project.

**default chapter mode:** preselect your preferred chapter mode.

**path to ImgBurn.exe:** to burn the ISO image with ImgBurn automatically.

**Params for ImgBurn:** here you can set the start parameters of ImgBurn. They are described in the ReadMe of ImgBurn. essential parameters are `/MODE ISOWRITE /SRC %iso% /DEST E:`, %iso% is replaced by TFtool and /DEST E: should point to your dvd writer.

[siehe auch:](#) DVD erstellen

## 2 Infobar

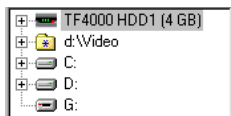
### 2.1 Infobar



Here you can see some informations to the current drive, to important options and to the current mode (trim).

## 3 Drives

### 3.1 drives treeview



Here, you can see all found Topfield drives, followed by a favorite path (if activated in [options\\_drives](#)) and all system drives (CD/DVD drives only if activated in [options\\_drives](#)). On selection of an entry in this treeview, all Topfield-Transport-Streams on this drive/folder are shown in the file list.

see also: [options\\_drives](#), [Options files](#), [File list](#)

### 3.2 Popup Menu

With a rightclick on an entry in the drives treeview, a popup menu with the following items is displayed:

**create folder:** Creates a new subdirectory in the selected folder. The new entry is opened to edit, so you can enter its name.

**rename folder:** The selected entry changes to edit mode. For Topfield drives rename is also possible, if TFtool is able to read the factory information of the disk (see [drive alias](#))

**delete folder:** deletes the selected entry, if the directory is empty.

Create rename and delete folders is also available for TF4000 drives, but the receiver firmware is not able to treat them.

## 4 Filelist

### 4.1 filelist

In this list, you can select one or more entries. You can **copy** them by drag&drop to a target in the drives tree (like you do in Windows-Explorer) or you can **delete** or **rename** them using menu -> file or by right-click on a file. Rename and menu entry **copy to PC** is only enabled, if one file is selected.

If source and target folder of a drag&drop action belongs to the same Topfield drive, a popup menu with the entries copy, move and cancel appears. If you choose **move**, only the directory entry of the file is moved to the new folder.

see also: [Options files](#), [filelist Popup menu](#), [delete file](#), [rename file](#), [save file as](#), [trim file](#)

### 4.2 Popup Menu

With a rightclick on an entry in the filelist, a popup menu with the following items is displayed:

**rename:** see menuitem [rename](#)

**delete:** see menuitem [delete](#)

**save as:** see menuitem [save as](#)

**trim file:** see menuitem [trim file](#)

**cut:** see menuitem [cut](#)

**ProjectX:** see menuitem [ProjectX](#)

**Multiplex:** see menuitem [Multiplex](#)

**AC3->MP2:** see menuitem [AC3->MP2](#)

see also: [ProjectX connection](#)

### 4.3 sort

With a click on a column header of the filelist, you can sort it by name, date, duration and size. Each additional click on the same header turns the sort order (a-z, z-a).

On TF4000 drives, you can save the order with the button below the filelist.

# 5 Preview

## 5.1 Preview



The preview always shows the first selected file. With the buttons **step** (single step), **play** (simple playfunction without sound), **pause** and **stop** (back to start), you can move through the file. With the trackbar you have free choice of file position. The function **fast forward** has the stages 2x, 4x, 8x (click several times; the speed is limited by the CPU performance) and **next I-Frame** jumps to the next GOP.

With **screenshot** you can save the current frame as a bitmap and **fullscreen** shows the preview in a maximized window.

see also: [Options preview](#)

## 5.2 File informations

Here you can see infos about the content of the files, which were read out of the [recording header](#), the *Program Map Table* and the first sequence of the file. More Details can be found in the log file.

# 6 ProjectX

## 6.1 ProjectX 0.90++ connection

To use ProjectX (PX) with TFtool, you have to compile the current version and it must work correctly. Then copy the file *ProjectX.jar* and the subfolder *lib* into the TFtool folder (for the help function of PX also copy the html folder). Then make a test by starting *ProjectX.jar* to create a X.ini file.

Remark: If you start ProjectX out of TFtool after this, you should see "ext.disc.access TFtool is running as server" in the log text of PX.

Remark 2: Unfortunately the Java Runtime Engine v1.6 and its JNI (Java Native Interface) does not work together with my Borland Compiler. So you can't use the ProjectX connection with this version. Use version 1.5 of the JRE (Java Runtime Environment)

In TFtool, there are several ways to use ProjectX:

**Menu->Extra->ProjectX:** see [start ProjectX](#). ProjectX is starting with the X.ini. Changes in properties are saved there.

**right click on a file ProjectX -> Demux etc.**

or

**Menu -> file -> ProjectX -> Demux etc.**

ProjectX starts with the demux.ini inserted in options ProjectX. The selected file(s) are served to PX and the demux run is performed. For output directory see [Options ProjectX cut](#):

Like *demux*, but ProjectX receives the selected cutpoints via an Xcl file.

see also: [Options ProjectX](#), [ProjectX connection \(old Version\)](#)

## 6.2 ProjectX connection

To use ProjectX (PX) with TFtool, you have to compile the actual version (since 0.81.9) and copy it with the belonging files (*ProjectX.jar*, *recources*, *html*) into the TFtool folder. Then make a test by starting *ProjectX.jar* to create a X.ini file.

Remark: Due to some changes in ProjectX 0.82.0 it is not possible to use it with TFtool up to 0.82.0.05b. Since 0.82.0.5c it is working again. Since Version 0.82.0, the folder "lib" has to be moved to the TFtool directory.

If you start ProjectX out of TFtool after this, you should see "TFtool is running as server" in the log text of PX. In TFtool, there are three ways to use ProjectX:

**Menu->Extras->ProjectX:** see [start ProjectX](#)

**right click on a file -> Demux:**

ProjectX starts with the TFDemux.ini. The selected file(s) are served to PX and the demux

run is performed. For output directory see [Options ProjectX](#)

**right click on a file -> Demux GUI:**

Like demux, but ProjectX starts with GUI and you have to start the the demux run manually, so you can change some properties. These changes are not saved after you close PX.

**Remark:** (for demux and demux GUI) Due to a bug in ProjectX version 0.81.9.00 the command line parameter for the used ini is not evaluated. I fixed this with the following steps:

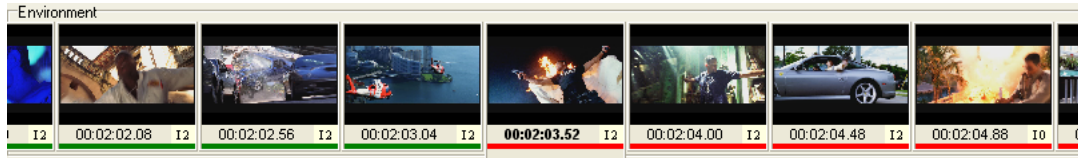
1. copy X.ini to [tftool]/temp/X.ini
2. overwrite X.ini with TFTdemux.ini
3. start ProjectX (it is using X.ini)
4. after shutdown of ProjectX copy back [tftool]/temp/X.ini to X.ini.

see also: [Options ProjectX](#)

# 7 Cut with TFtool and ProjectX

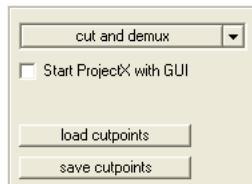
## 7.1 Elements of the cut window

Environment:



The environment shows the range before and behind the current frame. The stepping depends on the setting in the navigation area (in this example I-Frames). The picture in the middle is the same as in the preview screen. By a click on an image, you can move the scene to its position..

Main buttons:

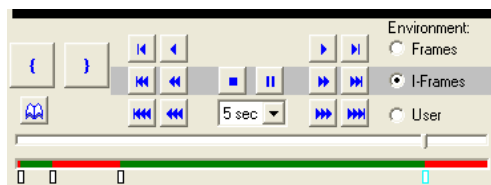


with "cut and demux" the cutting process is started. This button is also a dropdown selection, where you can choose other variants of output (TS with TF4000 or TF5000 header).

If you want to start ProjectX with graphical interface (GUI), set a tile in the checkbox.

Save and load cutpoints describes themselves.

Navigation:



The highlighted row decides the stepping of the environment. In the picture above "I-Frames" is selected, so you see the start frame of each GOP. The first button row shows all frames and the lower row uses a user defined stepping, which can be set in the dropdown control in the middle.

With { } you can set the IN and OUT cut points. At an OUT-cut you see the last remaining frame only in single frame step mode, otherwise the first I-Frame of the cutoff area is visible.

In single step mode there are some more buttons above the cutpoint buttons. With them you can move to the next/previous possible in- or out-cutpoint.

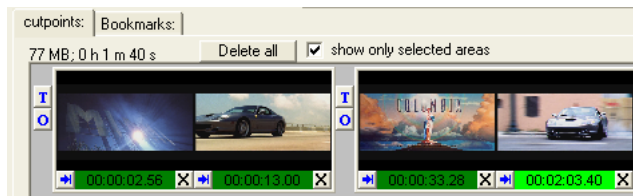
Also bookmarks can be set. They are temporary first and you can save them at leaving the cut window.





Below the slider for fast navigation is the cutting range display. Red parts are cutted off.



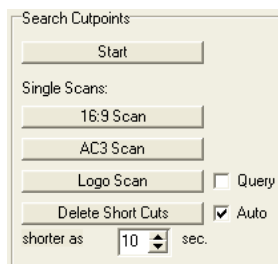
Click the small boxes under the display to move to a cutpoint or at the small circles for bookmark positions..

### Cutpoints:



Here you always see the first and last frame of an area.  deletes a cutpoint. A click on the image moves the preview to the cutpoint position. If a cutpoint is selected, you can shift it with  (below the cutting range display). The button  between two ranges starts a test for overlap (before and after an advertising). With  you can test a cut. The range some seconds before cut-out and after cut-in is played in the preview and you can adjust the positions of in and out.

### Cutsearch:



Here you can start an automatic scan for cut positions.

**Start:** Starts the process, all scan methods are processed until points were found.

**16:9 scan:** If there are changes in aspect ratio, this is the best test with fastest results. Parts with 16:9 remains in the stream, 4:3 parts are cutted out.

**AC3 scan:** If there are changes in the AC3 stream from 5.1 to 2.0, this scan sets the positions to cut off the 2.0 parts (advertising).

**Logo scan:** This is the most expensive test. First a logo is searched, then all ranges which not contains the logo are marked to cut off. This method can't succeed by 100% (e.g. in very bright frames), some short areas remains, they can be deleted with **delete short cuts** automatically.

## 8 miscellaneous functions

### 8.1 drive alias

If you use two identical drives, TFtool is able to set alias names for the drives to differ them. Therefor you can rename the drivename of a TF-disc in th drives treeview.

This is only available, if TFtool is able to read the ID sector of the disk.

see also: [rename folder](#)

### 8.2 Snap Preview Pictures

The TF4000 saves little greyscale preview pictures with each Videorecording in the directory "\_\_SNAP\_\_". These are the pictures, you can see in the recording list of the receiver.

Since version 0.9, TFtool copies this pictures with the recording to the subfolder "\_\_SNAP\_\_" of the target directory. They are also renamed and deleted, if the according video is renamed or deleted.

You also can save pictures from the preview as a snap. Therefor rightclick on the screenshot button and chose "save picture as snap" in the popup menu.

If "show all files" is selected in [Options->Files](#), you can view the snaps in the preview. The quality of the pictures is quite low, because they only have 16 gray scale values.

see also: [preview](#)

# Appendix

## A.1 Recording Header

The Topfield receiver saves streams, as they come from the satellite (Transport Stream, TS), but first writes a Header, containing informations about the recording.

## A.2 Cluster

The Topfield filesystem divides the disc into blocks (cluster) of min. 1 MB size. The size of this clusters depends on the size of disc and the type of the receiver (TF4000 / TF5x00).

## A.3 GPL remark

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