

CHANNEL ORGANISER TAP

1 INTRODUCTION

The Channel Organiser TAP is intended to be a "one-stop" facility to maintain your channel line-up and related files. This version has been radically changed to bring the features more in line with those in TopManager as far as the Topy UI permits. However those having a Windows PC that can easily be connected to their Topy will find TopManager much easier to use.

It has been designed for use in the UK on TF5800 and TF5810 models only, but it may be possible to get most aspects working on any other models in other countries supporting the "Logical Channel Number" (LCN) concept.

Unlike the "FastScanGui" TAP, all data files are user editable. At the time of writing that TAP is no longer being supported, so some users will find the embedded Mux lists are out of date.

2 MAJOR FUNCTIONS/FEATURES

Channel Organiser has the following functions:

- Channel scan - can be limited to a selected transmitter, the current transmitter channels, or groups of channels corresponding to the various aerial groups. Scanning only a singled transmitter or the current channels avoids the introduction of duplicate channels and minimises the scan time. A Factory Reset is performed, but your system settings are restored immediately afterwards, and timers are re-instated for non-MyStuff users (but not for FV+ firmware users) – see below.
- Channel deletion - allows deletion of unwanted channels (be they duplicates or just channels of no interest). To assist in the deletion of duplicates or poor muxes likely to lead to disc wipes, a signal quality rating is displayed. To assist deletion of unwanted channels, all channels in categories such as shopping, porn etc can be pre-selected[#].
- Timer regeneration/update – allows timers to be reinstated to the correct channel after scan and/or channel deletion.
- Favourites updates – allows MyStuff favourites to be generated, deleted, updated and/or re-ordered. **N.B.** Native favourites are no longer supported.
- Control file updates for TF5000 Display TAP, eit2mei, rt2mei, and EPG2MEI using a database file which can be separately updated[#].
- Auto-rescan and channel delete when channel list is found to be empty on reboot.
- A search timer to allow a channel search to be set up in advance for a particular day (for use while away from home when transmitter channels are shuffled).

[#] provided the "Freeview.dat" file has been installed - see details below.

The operation of each of the features above is described in detail below.

3 USE

3.1 Prerequisites

The required files can be downloaded from [here](#). TF5810 users should ensure that they have the [Rm] patch installed, and TF5800 users should ensure they have the [Re] patch installed (both are included in the Toppo.org.uk recommended firmwares). To use the full functionality, "Freeview.dat" and "FvTxData.tsv" files should be installed in "/ProgramFiles/Settings/" - the versions in the zip file may not be up to date, and the latest versions can be obtained from [Freeview.dat download](#) and [Tx data file download](#) respectively, or you can edit these yourself - see appendices 3 & 2 respectively.

3.2 Running Channel Organiser

Channel Organiser can be installed and run from any convenient directory, but needs to be in "Auto Start" to implement the auto-rescan and scan timer features. When required, simply run the TAP and the Scan menu as described below will appear after an initial "Initialising" message.

The functions of the major keys are indicated on each screen, and these should be adequate to be able to use Channel Organiser. However additional "short cut" keys are listed in the facility descriptions below. Help screens are available to clarify each screen's features.

On completion, MyStuff will be prompted to reload its various data files to match the new line-up and favourites choice, but new channel data will not appear in rt2mei data until the latter performs its next update.

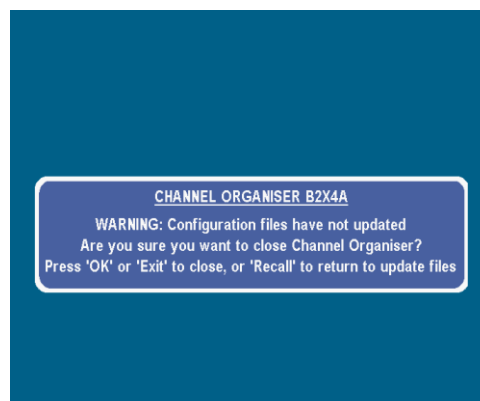
A (very verbose) log file is generated and saved as "/ProgramFiles/Logs/ChannelOrganiser Log.txt" each time the TAP is run manually, and as "/ProgramFiles/Logs/ChannelOrganiser BootLog.txt" when it runs automatically after booting. In addition, a history file ("/ProgramFiles/Logs/ChannelOrganiser History.txt") provides a history of operations performed which is updated each time the TAP is run, except when run from Auto Start and no rescan is found necessary.

If you experience problems during or after running Channel Organiser, see section 22.

N.B. Screen colours are dictated by a "skin" file (see para 16) so yours will probably differ from the screenshots below.

3.3 Stopping Channel Organiser

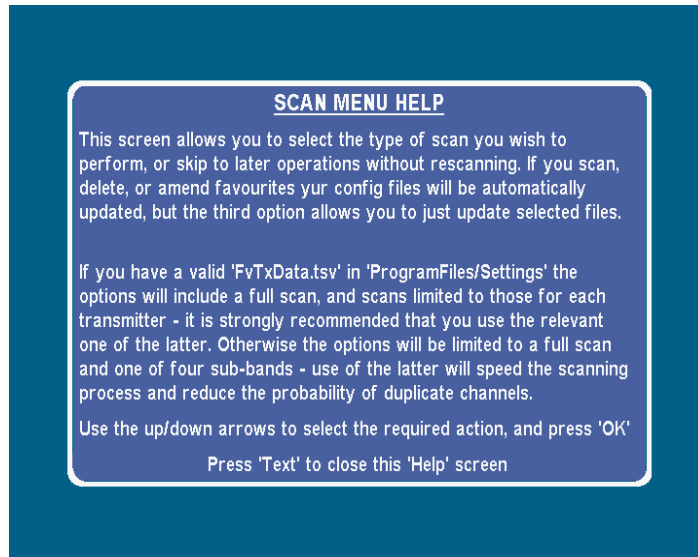
At each screen other than the "Help" screens (see below), pressing "Exit" allows you to abort current operations. However doing so will often mean that Favourites and/or configuration files are not consistent with your (new) channel line up, and you will see a message such as:



(The precise message will depend on the state when you pressed "Exit"). It is recommended that you press "Recall" to continue updating everything.

4 HELP SCREENS

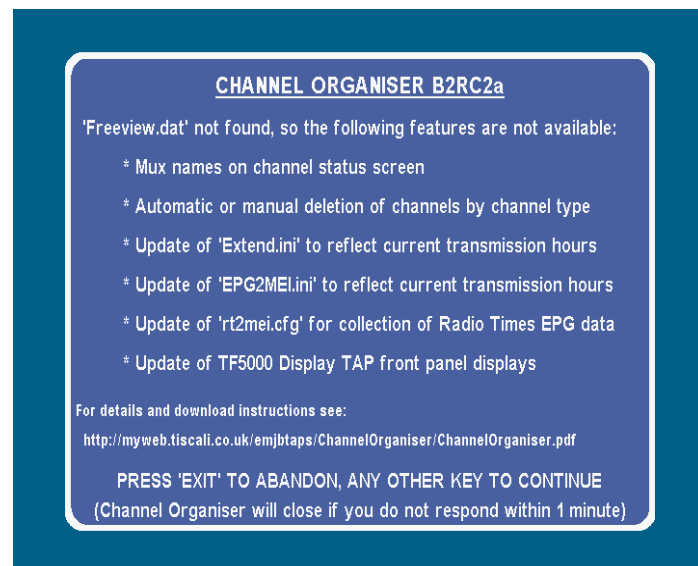
Wherever a user input is required, a "help" screen is available, such as:



by pressing "Text". Pressing "Text" again will remove the "Help" information and return you to the original screen

5 OPERATION WITHOUT "FREEVIEW DATA FILE"

If you have not installed the "Freeview.dat" file in "/ProgramFiles/Settings" the available features will be significantly curtailed, and you will see this initial screen:



You can then exit Channel Organiser to install that file, or continue to use the reduced facilities. If You fail to respond within one minute, Channel Organiser will close.

6 SCAN MENU

Unless a recording is in progress or imminent, the scan menu always includes options to:

- Skip the scan and go direct to later processes.
- Scan the last saved channels,
- Scan the transmitter (Tx) channels current when Channel Organiser was started.
- Scan all valid UK Tx channels (21-68)

If the "FvTxData.tsv" file is present, these will be followed by a list of all the transmitters in that file (~190 at time of writing). Otherwise these are followed by options to scan 4 sub-bands which will be quicker than scanning the full band. Use of the full- or sub-bands should be avoided if possible as these can lead to duplicated channels as well as wasted time.

There is a 1 minute activity time-out on this menu (but not on the associated help screen) - if no keys are pressed the TAP will automatically close.

The two versions of the menu are as follows:

CHANNEL SCAN MENU		CHANNEL SCAN MENU	
Key	Action	Key	Action
0/>	No scan - continue to channel review/delete	0/>	No scan - continue to channel review/delete
1	No scan - continue to Favourites update	1	No scan - continue to Favourites update
2	No scan - continue to manual configuration file update	2	No scan - continue to configuration file update
3/Archive	Saved scan: Anglia, Sudbury (44, 41, 58, 60, 56)	3/Archive	Scan saved: Anglia, Sudbury (44, 41, 58, 60, 56)
4/Live	Scan current Tx channels only (44, 41, 58, 60, 56)	4/Live	Scan Current Tx channels only (44, 41, 58, 60, 56,)
5	Scan all Tx channels	5	Scan All Tx channels
6	Scan Anglia, Burnham On Crouch (49, 52)	6	Scan Gp A (Red) Tx channels only, 21-37
7	Scan Anglia, Sandy Heath (27, 24, 51, 52, 48)	7	Scan Gp B (Yellow) Tx channels only, 35-53
8	Scan Anglia, Sandy Heath (+ Local) (27, 24, 51, 52, 48, 42)	8	Scan Gp CD (Green) Tx channels only, 48-68
9	Scan Anglia, Sudbury (44, 41, 58, 60, 56)	9	Scan Gp E (Brown) Tx channels only, 35-68
(10)	Scan Anglia, Tacolneston (55, 59, 42, 45, 39)	Info	Scan Gp K (Grey) Tx channels only, 21-48
(11)	Scan Anglia, Tacolneston + Local (55, 59, 42, 45, 39, 57)	PLEASE SELECT REQUIRED ACTION	
(12)	Scan Border, Caldbeck (25, 28, 23, 26, 29)	By pressing indicated key or scrolling and pressing 'OK' or pressing indicated key, where not in brackets. 'Exit' Closes TAP	
PLEASE SELECT REQUIRED ACTION		PLEASE SELECT REQUIRED ACTION	
Use Up, Down, << and >> to select your Tx and then press 'OK' or pressing indicated key, where not in brackets. 'Exit' Closes TAP		By pressing indicated key or scrolling and pressing 'OK' or pressing indicated key, where not in brackets. 'Exit' Closes TAP	

Once you have used one of the entries from the "FvTxData.tsv" file, that entry will appear under the saved entry, and deletion/renaming of the file will speed the appearance of the menu. Where a transmitter has a local channel mux, there are two lines, one with and without that mux. As the local muxes are normally lower power than the others and only gradually being introduced, and you may need to select the without version to avoid wasted time searching for that channel. Where "+ Local" is in brackets, this indicates that the transmissions had not started when the file was produced.

Under circumstances such as:

- I no longer maintain the file
- You wish to reduce the number of transmitters to speed menu loading.
- You wish to create a hybrid entry so as to receive the public service channels from a satellite transmitter (Tx) and the others from a main Tx (the former normally only include the public service channels).
- You wish to exclude scanning on a particular mux, perhaps because of poor reception.

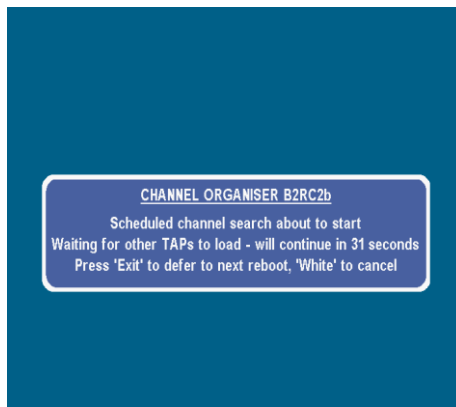
you may wish to edit the "FvTxData.tsv" file. This can be done with a spreadsheet program such as Excel or with a text editor that allows long lines such as NotePad - see Appendix 2 for details.

7 SEARCH TIMER

This is set up by inserting a file with the relevant details in "/ProgramFiles/Settings". This must be called ""ChannelOrganiser Scan Timer.txt". A sample with notes defining the layout is included in the zip file. The indicated channels are searched the first time the Topyy is rebooted with Channel Organiser in "/ProgramFiles/Auto Start" after 14:00 on the defined day or any day thereafter. The timer file is deleted when it has been obeyed so it only obeyed once. The recording timers are saved prior to the search, and re-instated afterwards whether or not MyStuff is running.

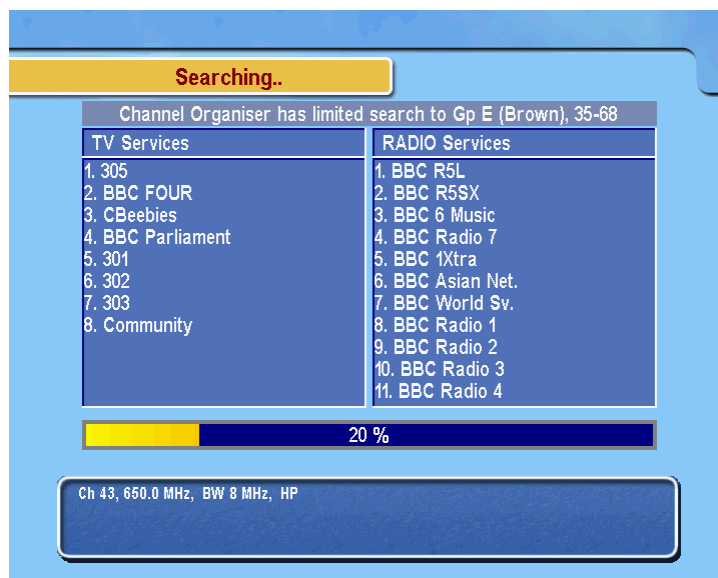
You will need to manually set up a watch timer for sometime after 14:00 (e.g. 14:15) to wake the Topyy (not at 14:00 precisely, as a TF5800 will then wake at 13:59 and TF5810 at 13:55).

When a "due" timer is found on boot-up, a 40 second delay with displayed countdown is applied to allow other TAPs to settle, and to allow the user to defer or cancel the channel search thus:



8 CHANNEL SEARCH

When the scan is initiated, a Factory Reset is applied after which your system settings are reinstated. Your TV picture may break up for a short time while this occurs. The native scan is then invoked, but the screen is overlaid with a message indicating that Channel Organiser has restricted the search thus:



Channel Organiser will recognise when the search is complete without user intervention, and continue to the next selected activity (if any) or return to the main menu.

N.B.1: If you subsequently do a channel search outside Channel Organiser the same restricted set will be searched until you do a Factory Reset, which will then limit the scan to the UK channels. To revert to the full (non-UK) search you need to first reboot your Toppo, and then do a Factory Reset.

N.B.2: The Channel Organiser search is compatible with the "Hs" patch which will halve the search time for all searches. However, unlike the FastScanGui TAP, it does not temporarily install this patch, so will take twice as long if that patch is not installed.

N.B.3: Occasionally the Toppo scan fails to detect channels on one mux (often the first) for no apparent reason (using Channel Organiser, TopManager, or FastScanGui). If a single transmitter search is selected, and one or more of the transmitter channels is empty, the search will be repeated once.

9 CHANNEL SUMMARY PAGE

Prior to performing deletions (whether or not a scan has been performed), a status page is displayed normally showing:

- The mux name (taken from the "Freeview.dat file"), Tx channel no, first few channel names on that mux, and signal strength & quality for each Tx channel on which programme channels were found.
- The Tx channel no for each empty mux, when you have just scanned a specific list of Tx channels.
- The number of TV and radio channels
- A warning, where relevant if any channels problem have been detected (i.e. duplicates present, LCNs > 750, or quality less than 98%)
- A warning if the number of channels exceeds the number recommended for your model.
- A warning if any illegal values, missing entries, or data inconsistencies exist in the "Freeview.dat file" (if present, otherwise just a reminder that it is missing).

N.B. Many categories of error in the "Freeview.dat" file will only be found when the relevant channel is present on the Toppo, and thus will not be detected if that channel has been deleted previously and you have not rescanned. The error file is therefore only deleted when no errors have been found immediately following a scan.

The summary screen appears thus, depending on the results of the checks :

CURRENT CHANNEL SUMMARY

MUX INFO:	Level	Quality
PSB1 on Tx Ch 44 incl: BBC TWO, BBC THREE, BBC F...	100	100
PSB2 on Tx Ch 41 incl: Channel 4, Channel 5, ITV2, Cha...	100	100
COM4 on Tx Ch 58 incl: QVC, G.O.L.D., bid, Home, ITV2...	100	100
COM5 on Tx Ch 60 incl: Dave, Really, Dave ja vu, E4+1,...	100	98
COM6 on Tx Ch 56 incl: 4Music, Yesterday, VIVA, Ideal...	100	100

CHANNEL INFO:

You have a total of 117 channels (93 TV and 24 Radio)
 All channels appear to be OK
Suggest no more than total of 60 channels to avoid memory problems
 No errors found in your Freeview.dat file

Key Actions: 'OK' = Proceed to delete channels, 'EXIT' = Close TAP,
 'Info' = Re-measure, 'Recall' = Back to Scan menu, '>>' = Skip deletions

CURRENT CHANNEL SUMMARY

MUX INFO:	Level	Quality
on Tx Ch 44 incl: BBC TWO, BBC THREE, BBC FOUR,...	100	100
on Tx Ch 41 incl: Channel 4, Channel 5, ITV2, Channel 4...	100	100
on Tx Ch 58 incl: ITV2 +1, 5*, 5 USA, QUEST, The Zone,...	100	100
on Tx Ch 60 incl: Dave, Really, Dave ja vu, E4+1, Challe...	100	99
on Tx Ch 56 incl: 4Music, Yesterday, VIVA, ITV4, 4seven,	100	100

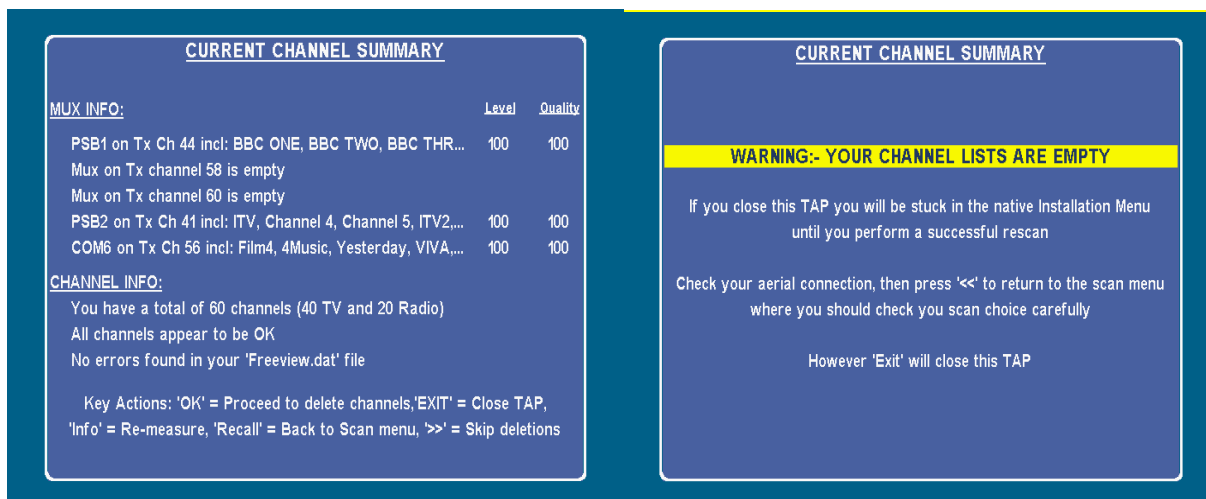
CHANNEL INFO:

You have a total of 58 channels (34 TV and 24 Radio)
 All channels appear to be OK
 No errors found in your Freeview.dat file

Key Actions: 'OK' = Proceed to delete channels, 'EXIT' = Close TAP,
 'Info' = Re-measure, 'Recall' = Back to Scan menu, '>>' = Skip deletions

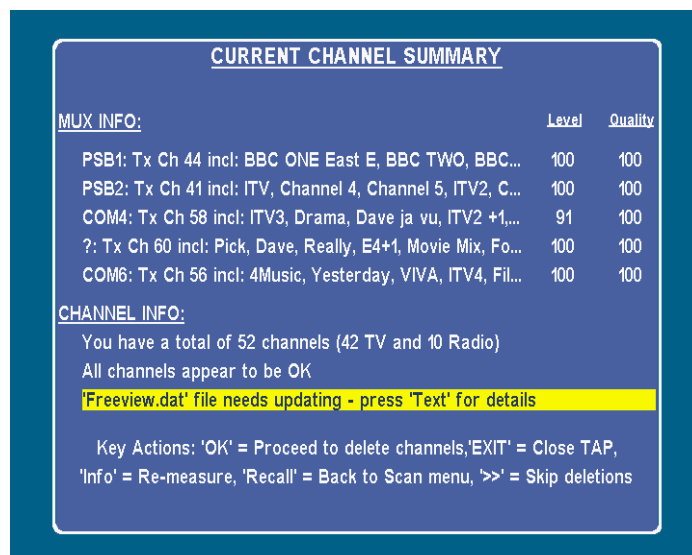
If the "Freeview.dat" file is not present, or does not have an entry for the first channel found on a Mux, no mux information is displayed. The measurement of signals takes approximately 3 seconds per mux, and you should not move on to the deletions menu until this is completed.

Warnings are generated if one or more muxes are empty (after the repeated search), or if no channels are found on any mux, thus:



In the latter case the only options are to close the TAP and return to the scan menu. If the Local mux has been selected at the scan menu, and is either not detected or has poor quality (<98), you should return to the scan menu and rescan.

If any discrepancies are found between your "Freeview.dat" file and you channel line up, or data is missing from the file, you will see something like:



Pressing "Text" will bring up a list of the first 15 problems. While that screen is still visible you can update the file by copying to a PC/Mac etc, editing, and copying back to the Toppo, and the new version will be checked on pressing "Text" again.

N.B.1 Closing the TAP with no channels will leave you on the native installation menu, which you will be unable to leave until you have completed a successful scan.

N.B.2: There is a problem with the TF5810 firmware which leaves a graphic superimposed on the on the "Channel lists are empty" screen, and on the subsequent scan menu screen when you return there to rescan. These screens have been optimised to minimise the effect of this graphic.

In addition to the indicated key actions, if you have just re-scanned pressing "Record" records the key parameters of all channels in "/ProgramFiles/Logs/ScanChannelData.tsv".

10 CHANNEL DELETE MENU

The following categories of channel are preselected for deletion:

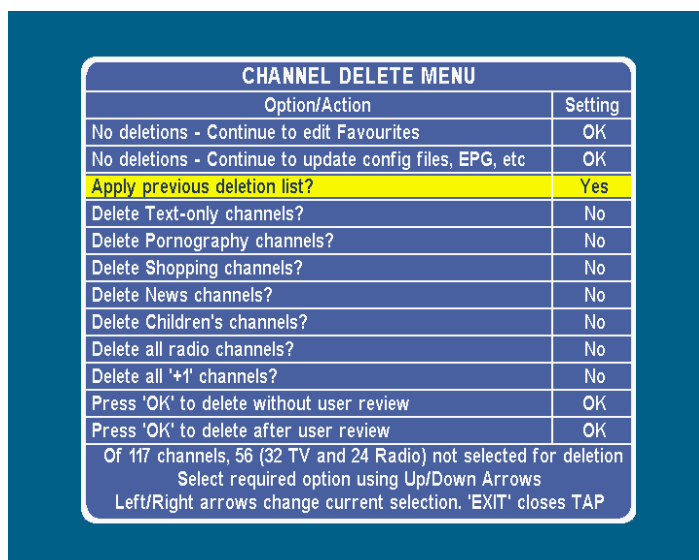
- Those with LCN \geq 750 (or alternative value specified in the Freeview.dat file)
- If "Freeview.dat" is installed, all Web TV channels (which cannot be viewed on the Topsy),.
- If "Freeview.dat" is installed, and unless a CAM is installed, all Pay TV channels (but not the Pay-Per-View ones which I assume can be viewed/recorded on a Topsy).
- The duplicated LCNs with the poorest signal (i.e. lowest quality, or lowest signal strength if quality levels are the same).

However you can unselect them if you choose the option to review the deletions prior to their implementation.

The menu has options to:

- Skip the deletions and go direct to later processes.
- Preselect your previous deletion list
- Preselect various categories of programme channel (e.g. all shopping channels), provided you have the "Freeview.dat" file installed, if "Freeview.dat" is installed.
- Delete all radio channels
- Proceed to delete all the reselected channels without review. However this option will not be available if Channel Organiser has detected a possible LCN shuffle or other channel changes and does not have sufficient information to resolve the changes with confidence.
- Proceed to review the channels to be deleted, where channels preselected for deletion can be re-instated and additional channels selected for deletion.

The number of remaining channels is displayed at the bottom of the menu.



CHANNEL DELETE MENU	
Option/Action	Setting
No deletions - Continue to edit Favourites	OK
No deletions - Continue to update config files, EPG, etc	OK
Apply previous deletion list?	Yes
Delete Text-only channels?	No
Delete Pornography channels?	No
Delete Shopping channels?	No
Delete News channels?	No
Delete Children's channels?	No
Delete all radio channels?	No
Delete all '+1' channels?	No
Press 'OK' to delete without user review	OK
Press 'OK' to delete after user review	OK
Of 117 channels, 56 (32 TV and 24 Radio) not selected for deletion Select required option using Up/Down Arrows Left/Right arrows change current selection. 'EXIT' closes TAP	

The deletion entries do not appear in the menu if recording, or when a recording is due to start within the next 10 minutes, leaving just the options to move on to other activities.

11 CHANNEL DELETION REVIEW

The user review screen consists of one line per channel, each containing in the LH column:

- Channel type (TV or Radio)
- LCN
- Channel Name (possibly truncated in the case of long names)

and in the RH column

- A four-letter abbreviation for the channel content such as "Ente" (for entertainment), "Porn", or "Shop" (for shopping) taken from the Freeview.dat file, if present.
- The current selection state
- A two-digit signal rating code. The first digit represents the quality in range 91% to 100%, and the second represents the (strength-1)/10, so 99 represents a perfect signal, and anything less than 85 is likely to cause problems

The panel at the bottom indicates the effect of the main keys. In addition:

- TvRadio scrolls to first radio channel
- Keys 0-9 scroll to first LCN in ranges 1-9, 10-19, 20-29, , 90-99
- Info scrolls to first interactive channel (LCN = 300 etc)
- Slow Motion – marks all channels on the same transmitter channel as the selected channel to be deleted – only applicable when signal quality and transmitter channel are displayed

thus:

SELECT CHANNELS FOR DELETION			
LCN - Name	Channel Cats	Seln	Signal Rating
TV 1 - BBC ONE	Ente	Retain	99
TV 2 - BBC TWO	Ente	Retain	99
TV 3 - ITV1	Ente	Retain	99
TV 4 - Channel 4	Ente	Retain	99
TV 5 - Channel 5	Ente	Retain	99
TV 6 - ITV2	Ente	Retain	99
TV 7 - BBC THREE	Ente	Retain	99
TV 9 - BBC FOUR	Ente	Retain	99
TV 10 - ITV3	Ente	Retain	99
TV 11 - Pick TV	Ente	Retain	79
TV 12 - Dave	Ente	Retain	79
TV 13 - Channel 4+1	Ente	Retain	99
TV 14 - More 4	Ente	Retain	99

58 total channels remaining (34 TV & 24 Radio)
 '^', '<<', 'v', '>>': Scroll Up/Down; 'White', '<' or '>': Toggle current seln
 'Slo Mo': Delete all on this Tx Channel; 'Recall': Return to Delete menu
 'OK': Implement deletions; 'EXIT': Abandon deletions & close TAP

In addition to toggling the selection, the "White" key scrolls down one line to ease rapid deletion of consecutive channels.

12.2 Contents of one Favourites List

The presentation in this mode is as follows:

EDITING CONTENTS OF 'All 4s'	
Channel	'X' = Selected
1 - BBC ONE	-
2 - BBC TWO	-
3 - ITV1	-
4 - Channel 4	X
5 - Channel 5	-
6 - ITV2	-
7 - BBC THREE	-
9 - BBC FOUR	-
10 - ITV3	-
11 - Pick TV	-
12 - Dave	-
13 - Channel 4+1	X

Entries in current list: 6

'A', '<<', 'v', '>>': Scroll Up/Down, '<' & '>': Change file to be edited
 'White': Toggle selection; 'PipSw': Change view; 'Rec': Edit name
 'OK': Save changes; 'EXIT': Close TAP; 'Recall': Return to Favs menu

In addition to the key actions shown on-screen:

- TvRadio scrolls to first radio channel
- Keys 0-9 scroll to first LCN in ranges 1-9, 10-19, 20-29, , 90-99
- Info scrolls to first interactive channel (LCN = 300 etc)

12.3 Order of Contents of Favourites List

This screen shows the order of the contents of one Favourites list thus:

EDITING DISPLAY ORDER OF 'All 4s'	
Position	Channel
1	Channel 4
2	Channel 4+1
3	More 4
4	Film4
5	4Music
6	E4

Entries in current list: 6

'A', '& 'v': Scroll Up/Down, '<' & '>': Change file to be edited
 'Green'/Yellow': Promote/Demote selection; 'PipSw': Change view
 'OK': Save changes; 'EXIT': Close TAP; 'Recall': Return to Favs menu

13.2 TF5000 Display TAP

The TF5000 Display TAP ".chn" file defines the abbreviated names to be displayed on the Topsy front panel. It is assumed to live in either "/ProgramFiles/" or "/ProgramFiles/Settings/". Channel Organiser takes font etc data from the old file, the abbreviated names from the Freeview.dat file, and produces an up-to-date ".chn" file. An entry is made for every channel for which Freeview.dat data is available, plus any others on your Topsy which will be labelled with just the LCN, preceded by "R" for radio channels.

On completion, the TF5000 Display TAP is restarted to pick up the new information, but only if there is a copy in Auto Start.

This file is automatically updated after a rescan, or after a change in the Freeview.dat is detected.

13.3 rt2mei – An External Application to Collect Radio Times EPG Data for MyStuff

The rt2mei.cfg file defines the channels for which EPG data is to be collected (i.e. any channel appearing in one or more of your Favourites), and the Radio Times web site code and the Freeview transmission hours for those channels (some channels have different hours for Freeview and for satellite transmissions, so it is important to limit the hours for which data is collected in these cases).

The Radio Times website allows for regional variations, but is (at the time of writing) somewhat inconsistent. There are generic versions for BBC1/2 where local news is merely identified as such, whereas the regional versions have entries such as "Look East". In the case of ITV1, however there does not seem to be a generic version, and ITV1+1 does not seem to have entries for all regions. When you first run this version of Channel Organiser it will default to the generic versions where available. However if you are using the EPG2MEI it will change to the transmitted entry, so this probably does not matter. To change region you need to use the manual configuration option at the initial scan menu, and then select "Update rt2mei configuration file resetting region" above to get screen such as:



Press "OK" after selecting the relevant region to move on to the next regionalised channel, or finish the process when all channels have been processed. For consistency with Favourites Manager, rt2mei.cfg is stored in "/ProgramFiles/Settings/MyStuff/FavLists".

Normally Channel Organiser will omit any channels where Freeview.dat indicates a zero RtCode, as these are channels not supported by the Radio Times website (which is not to be extended as new channels appear). However, if you rename "ChannelOrganiser.tap" as "ChannelOrganiserForAs2mei.tap" (case sensitive!) the zero code channels are included, as as2mei should correctly convert this file (but I'm not sure what it will do to rt2mei!!).

Using the standard rt2mei files, you will need to transfer the rt2mei.cfg manually to the computer etc running rt2mei. However the Channel Organiser zip file includes 2 modified rt2mei scripts so the file is read directly from your Toppo without needing any manual intervention. These are used as follows:

- “rt2mei.bat” replaces a file of the same name supplied with rt2mei for those that run rt2mei on a Windows PC. **N.B.** If rt2mei is in a subdirectory of \Program Files\ on a Vista PC, this batch file will fail to transfer the configuration file from the Toppo, and your last one will continue to be used. In those circumstances you will need to move rt2mei into another directory.
- “rt2mei_Asus_Slug_LSL_Script” replaces the “rt2mei” file for those running rt2mei on an ASUS, Slug, Link Station Live, etc. I suggest you merely rename it rt2mei. It should be invoked with the “-f” and “-gc” switches (i.e. “/././rt2mei -f -gc”). **N.B.** This is currently based on the 0.63a version of rt2mei, which is not the latest.

It is important that with either PC or ASUS etc, the “-f” switch is used, as otherwise your settings for “MyFavourites” will be sent to the Toppo, overwriting anything you have set up.

When Channel Organiser closes, it checks the “MyStuff.mei” file in “/ProgramFiles/” to determine whether the rescan has led to any LCN changes. If so, the file is updated, which can take a couple of minutes per changed LCN in the unlikely event that the number of digits in the LCN has changed.

13.4 **Extend TAP – A TAP to Automatically Extend Overrunning Recordings**

The Extend TAP’s ini file specifies which channels have EPG data and the times of transmission. Channel Organiser generates this data from the Freeview.dat file taking account of differences between it and your LCN list. Other data is taken from the previous Extend.ini, which is assumed to live in “/ProgramFiles/Settings/”.

This file is automatically updated after a rescan, or after a change in the Freeview.dat is detected.

13.5 **EPG2MEI & Eit2mei TAPs – TAP to Generate MyStuff EPG Data From The Broadcast EPG Data**

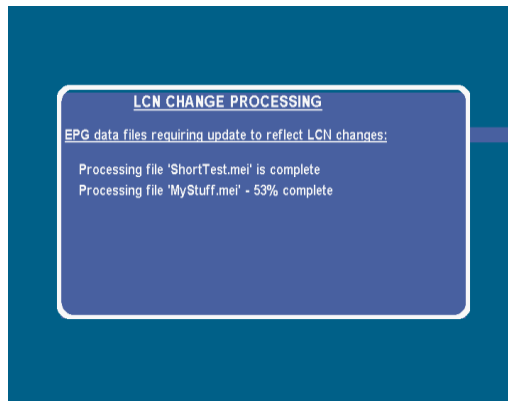
The new “ini” files for these TAPs will direct them to collect data for those channels in your favourites lists only, in order to minimise memory requirements. (The previous options to collect for all channels or for all TV channels have been removed)

Other data is taken from the previous ini files, which are assumed to live in “/ProgramFiles/Settings/”.

These files are automatically updated after your Favourites have been updated, or a change in the Freeview.dat is detected.

13.6 MyStuff ".mei" EPG Files

These files provide EPG data to MyStuff, with the channels being identified by LCN. If the LCNs are shuffled, these files need to be updated to reflect the new line up as otherwise the wrong channels could be recorded. The automatic update facility compares LCNs before and after a scan, correcting these files as necessary. This could take several minutes, during which time this screen will be displayed:



N.B. If all channels are lost and an auto-scan occurs (see below), Channel Organiser currently does not have a reference to detect LCN changes, so this logic will never be invoked.

14 AUTO-RESCAN

If the TAP is run from Auto Start, and the channel list is found to be empty, the last scan is repeated, followed by a repeat of the deletions that have occurred since the last scan, which should restore your channel list provided you have been using this TAP for all your channel operations. However it will not delete any new channels, and will reflect any LCNs shuffles¹ that have taken place in all but the ".mei" data.

15 INTERACTION WITH OTHER TAPS

Scanning and/or channel deletions may cause some EPG-related TAPs to be confused or even crash when they suddenly find the channel line-up has changed. To this end:

- MyStuff is inhibited while scanning and deleting, and then instructed to reload the relevant files, including Favourites (hence the MS Loading/Searching messages appearing when Channel Organiser closes). **THERE IS NO NEED TO STOP "MyStuff" WHEN RUNNING IN ORDER TO RUN CHANNEL ORGANISER - IF YOU DO ".mei" FILES WILL NOT BE UPDATED**
- When any relevant change has occurred, the EPG2MEI TAP is instructed to stop and, provided it is called "EPG2MEI.tap" and can be found in "/ProgramFiles/Auto Start", is restarted.
- When any relevant change has occurred, the Extend TAP is instructed to stop and, provided it is called "Extend.tap" and can be found in "/ProgramFiles/Auto Start", is restarted.
- When any relevant change has occurred, the TF5000 Display TAP is instructed to stop and, provided it is called "TF5000Display.tap" and can be found in "/ProgramFiles/Auto Start", is restarted.

EPGNavigator should be stopped manually before running Channel Organiser.

If you find other examples, please use the feedback link below to report the details.

¹ Provided the last channel deletions and Favourite selections were performed with this version of Channel Organiser - otherwise it may get confused.

16 **SKINS**

The colours used for the display can be changed using a "skin" in "ProgramFiles/Settings/Skins/". It looks for:

1. "ChannelOrganiser.mcf". If this is not found,
2. "EMJB Taps.mcf", which allows a common colour scheme to be used for all my TAPs. If this is not found,
3. "CurrentlySelectedSkin.mcf". This is produced by MyStuff 5.5 onwards when you change skin to anything other than the default, and allows other TAPs to automatically change their skins in line with that in use by MyStuff.

If none of the above are found, a default colour scheme is used which is optimised for CRT TVs.

A copy of a MyStuff skin file can be used, though only the following elements are used:

- "Background=" (text background)
- "TextForeground=" (text)
- "Highlight=" (selected item background)
- "TextHighlightedForeground=" (selected item text)
- "Frame=" (border round windows and dividing lines)
- "Screen=" (area outside window)

and all other entries are ignored. The keywords above should be followed by the red, green & blue values (separated by commas) in the range 0-255 with no spaces or final comma (e.g. 255,0,0 for red, 255,255,0 for yellow etc).

17 **KNOWN OUTSTANDING ISSUES**

1. Occasional loss of channels from one mux (usually the first) when scanning, which should be overcome by the scan repeat.
2. On the TF5810 (and probably TF5800 using FV+ firmware?) scanning seems to cause problems with subtitles.
3. Native graphics overlay the channel status & scan menu screens when no channels have been found by a scan.

18 **HEALTH WARNING**

You use this TAP entirely at your own risk, and no guarantee of correct operation is provided! The majority of testing has been done by MyStuff users, so there may be unexpected interactions with other TAPs.

19 **FEEDBACK**

Please use <http://forum.topyy.org.uk/forum/viewtopic.php?t=15218> to provide feedback, notably of bugs and any additional features you would like.

20 VERSION HISTORY

B2RC1:

- Warning screen added when no "Freeview.dat" found
- Bug in TF5000 Display TAP channel file generation fixed
- Re-arrangement of EPG2MEI restart to avoid stopping before it is properly established (Otherwise can get crashes)
- Logging changed to give separate files for manual and at-boot operation
- Addition of wildcard feature in "Freeview.dat" file to cope with regionalised names
- Addition of screen showing "Freeview.dat" errors

B2RC2: Fix for crash when using scan timer.

B2RC3: Fix for rubbish in Extend.ini file
Fix for use of keys 4-9 on scan menu

B2: Small changes to cope with introduction of regional channels

B2.1: Change to display of transmitter details, to give better local mux presentation
Option to include as2mei channels in rt2mei.cfg added

21 ACKNOWLEDGEMENTS

To chunkywizard and Geoff Bacon for encouragement and testing, R2-D2 for use of various code and help with TF5810 operation, Charley, John, Dan, & Bizman for testing (notably on the TF5810), and to FireBird for use of his excellent library.

22 PROBLEM SOLVING

The following may help those that experience problems:

- Will not search all channels from native menu after running Channel Organiser – reboot your Topy and do a Factory Reset.
- Will not update ini etc files – check that they are in the right locations as listed in section 0.

APPENDIX 1

THE CHANNEL CHANGES PROBLEMS

CHANNEL IDENTIFIERS

General

On the Topsy, channels are identified by four different parameters, as follows:

- The Topsy Service Number (SvcNum), which points to lists of either TV or Radio channels in LCN order, and is used for most Topsy internal operations, including the interfaces between TAPs and the firmware.
- The LCN (Logical Channel Number), which is allocated by the Freeview authority, and generally used in user interfaces to select channels and in any data sets to identify a channel.
- The channel name, generally used in user interfaces to display the identity of a channel.
- The Freeview Service Identity (SvcId) which is can be viewed as being equivalent to a network address.

Further details and the problems associated with each are described below.

Service Number

The major issue with the Topsy SvcNum is that it potentially changes whenever a channel is deleted, or when a re-scan is performed.

LCN

While the LCN is dictated by the Freeview authority, it is to some extent a "marketing" tool, and therefore subject to change to suit the (changing) policies to group similar channels and meet the wishes of the channel owners. The Topsy establishes the LCN when scanning, and it is not changed even when it is changed in the broadcast data stream. Unfortunately there are few unused LCNs for many channel categories allowed within the allocation policy, so LCN swaps can, and do often, occur

Name

The channel name is a pure marketing tool, and owners seems to be free to change it at will. The name can be up to 100 characters, so the number of possible names is astronomical and re-use of names very unlikely. The Topsy normally updates the name as soon as it is tuned to a channel on the same mux, but this could be inhibited by a TAP, or by the user renaming the channel.

Service Identity

This seems to be the only parameter which can be relied upon as a true identifier of a channel, but even then there is a complication - different regions of BBC 1, BBC 2, and ITV1² use different identities.

² ITV1 has recently been renamed simply "ITV". However I continue to use "ITV1" here as "ITV" could be read as applying to ITV2, ITV3, & ITV4 as well.

RELEVANT DATA SETS & THEIR CHANNEL IDENTIFIERS

The potential problems associated with rescanning, channel deletions etc are illustrated by the following table

<u>Data Set</u>	<u>Identifier Used</u>	<u>Addressed by CO B1.2?</u>
Native Favourites	SvcNum	No longer supported
Existing Timers	SvcNum	Yes
Any TAP selecting channels	SvcNum	For MyStuff only
Any TAP setting timers	SvcNum	For MyStuff only
Any TAP using native EPG	SvcId	No action required
MyStuff Favourites	LCN	Yes
Freeview.dat	LCN	Yes
"TF5000 Display" TAP name abbreviations	LCN	File re-created from Freeview.dat info
"Extend" TAP ".ini" file	LCN	File re-created from Freeview.dat info
"EPG2MEI" TAP ".ini" file	LCN	File re-created from Freeview.dat info
"eit2mei" TAP ".ini" file	LCN	File re-created from Freeview.dat info
MyStuff ".mei" EPG files	LCN	Yes
Logo icons	Name	No

so those using the SvcNum will be affected by channel deletion and all by scanning, and all but the logos by rescanning. The logos can be invalidated at any time with the normal Topyy arrangements. The term "file re-created" means that CO can ignore the previous values, and create the file from first principles whenever a change is suspected.

CHANNEL ORGANISER' SOLUTIONS

General

The preferred approach has been to add channel names and SvcId's to the relevant files (as comments where compatibility precludes inclusion in the basic format), and then determine the correct LCN by applying the following rules.

1. If an SvcId is available in the old data and matches that of a current channel, take the new LCN to be that of the matching channel.
2. Otherwise, If a channel name is available in the old data and matches that of a current channel, take the new LCN to be that of the matching channel.
3. Otherwise assume the old LCN is valid, but indicate to the user that the confidence level is low and the relevant file should be reviewed.

However TopManager uses a different approach, namely recording the previous channel line up after each scan and noting the differences when a new scan occurs. This approach has not been used as it seems to depend on scans not being performed with either the native menu or with FastScanGui - a situation considered more likely for CO users. Also the Auto-rescan feature could complicate the issue. However CO and TopManager maintain each others' files, so no problems should occur when alternating between them.

Existing Timers

When Channel Organiser starts, it records all the current timers, but with the SvcNum replaced by the SvcId. After a rescan, and if MyStuff is not running and FV+ firmware is not in use, the SvcId is replaced by the new SvcNum, and the timer re-instated. When deleting a channel, The FireBird library delete function automatically shuffles all subsequent channel timers down one.

TAPs Selecting Channels and/or Setting Timers

This has only been investigated in detail for MyStuff, where the internal operations are generally LCN-orientated, with an LCN/SvcNum map being generated at start up. Thus changing the LCN/SvcNum relationship while MyStuff is running will at best cause chaos, and at worst cause a crash. Channel Organiser addresses this problem by:

1. Suspending the operation of MyStuff while Channel Organiser is running.
2. On allowing MyStuff to continue, passing an instruction to regenerate the LCN/SvcNum map, and reload all user and EPG files.

I would be prepared to include similar logic for other such TAPs, but none seem to be under continued active development. If you continue to use them, you need to stop them manually (not always easy!) before running CO, and restart them afterwards.

MyStuff Favourites

Channel Organiser and Top Manager add both channel name and Svclid as comments against each LCN listed, thus allowing the preferred logic above to be applied. The first time you run CO, or if the files are manually edited, the extra information may not be available, in which case the Favourites menu screen advises you to review the relevant lists in case the wrong associations have been made.

"Freeview.dat"

The latest version of "Freeview.dat" includes LCN, Name, and Svclid for most channels, thus allowing the preferred logic above to cope with changes in LCNs or names that have not been reflected in the version of "Freeview.dat" being used. The associated error report identifies the apparent error to allow the user to confirm the changes and update the file for future use, thus avoiding the error message on the Channel Status page.

There is a problem with the "regionalised" channels, however, in that each region's version has a different Svclid, but same LCN and name. Fortunately most of these are among those least likely to change LCN, so a Svclid of -1 is used in "Freeview.dat" to indicate that no Svclid is available for these channels, and no error message should be generated (as would occur for a Svclid of zero). If this proves to be a problem, I could add the regional Svclids to the regional data for rt2mei.cfg file, but it is not easy to establish what all the values are other than by getting feedback from someone in each region.

TAP etc Configuration Files

Where these use the LCN, new versions of the file can be produced for a new channel line up from "Freeview.dat" without reference to the old LCN and so the conversion from old to new is not required. However the data will not be used until the TAP restarts. Thus for:

- "TF5000 Display" TAP - the TAP is stopped, and restarted if there is a copy in "Auto Start" called "TF5000 Display.tap"
- "EPG2MEI" TAP - the TAP is stopped and restarted if there is a copy in "Auto Start" called "EPG2MEI.tap"
- "Extend" TAP - the TAP is stopped and restarted if there is a copy in "Auto Start" called "Extend.tap"
- "eit2mei" TAP - currently no action taken, so awaits next reboot.

In the case of "rt2mei", this is normally run once per day, and never on the Topy itself, so CO cannot influence the run time. However its output ".mei" file is corrected as discussed below.

MyStuff ".mei" Data

Versions of this file are produced by rt2mei and by the "EPG2MEI" or "eit2mei" TAPs. If LCNs have changed, existing files will be wrong, potentially leading to recordings of incorrect channels. When a scan is performed, old and new line-ups are compared to establish which have changed, and all the files are updated accordingly.

N.B. This logic will fail in the event of an auto-scan after channel loss, as there will be no record of the channel line-up when the ".mei" data was generated. A possible future improvement in these circumstances would be use of the TopManager map file to define the assumed previous configuration, but this would not cope with the case where the previous scan was performed by the "FastScanGui" TAP, or using the native scan menu.

APPENDIX 2 - "FvTxData.tsv"

TRANSMITTER INFORMATION

- (1) This file provides the channel numbers for each of the transmitters in the UK. In some cases two versions are provided, with the correct one to be chosen according to the date.
- (2) The file should be installed in the "ProgramFiles/Settings" directory on the Topyy. Note that both directory and file name are case sensitive.
- (3) The file is in a "tab separated value" spreadsheet format, i.e. the entries for one transmitter/date combination consist of a series of data fields separated by tabs, and each entry is on a new line. It can be edited with either a spreadsheet such as "Excel" or long line text editor such as "Notepad".
- (4) The first 3 lines contain comments & headers, and are ignored.
- (5) The fields associated with one entry are as follows:
 - A Region - simple text
 - B Transmitter name - simple text
 - C Start date for that entry, where relevant (simple text), otherwise blank
 - D-I Channel numbers for up to 6 muxes (the column/order in which they appear is ignored by Channel Organiser). Only digits 0-9 are permitted in these fields.
 - J. Onwards - are ignored

Column J includes the parent station for repeaters in the supplied file.

The maximum number of entries processed by Channel Organiser is 250.

APPENDIX 3 "Freeview.dat"

Freeview Channel Information

This currently is intended to store all the information that Channel Organiser needs to know about the current channel configuration, notable for generating the configuration files for other TAPs. It is a simple text file that can be edited with a text editor such as Windows NotePad (Wordpad is not recommended as the lines are long).

The "#" character is used to indicate that the rest of a line contains comments, and should be ignored.

The basic channel information consists of one line per channel, containing a series of fields separated by one or more tab characters. Each field consists of a name followed by "=" and the field value with no intervening spaces. The fields used by Channel Organiser are:

- LCN=
- Name=
- SvclId= {SvclId value, set to -1 for not available, otherwise must be > = 1}
- RtCode= {Radio Times database code for that channel to be used by rt2mei}
- Mux= {Mux name}
- Type= {TV, Pay TV, PPV TV (Pay per view), HDTV, Web TV, Int TV (Interactive), Text, or Radio, used to determine deletion categories}
- HasEpg= {0 or 1}
- FpdName= {TF5000 Display TAP abbreviated name}
- StartTime= {Time of start of transmission as hhmm, set to 0000 if 24 hours}
- EndTime= {Time of end of transmission as hhmm, set to 0000 if 24 hours}
- Content= {Content genre, to allow channel delete selection by genre}

The order of these fields on a line is immaterial, except that the LCN entry must be the first on a line.

There is a complication in that the Radio Times data code some channels is region-dependent. A different type of data line is therefore allowed which consists of "RRC={LCN No}" followed by a series of up to 20 entries such as "24=Anglia" to indicate that 24 is the Radio Times database code for the Anglia region. Only five such lines are currently permitted, but they can be allocated to any LCN.

"@FirstInvalidLcn=" is used to indicate the start of the range of invalid LCNs (750 at the time of writing).

"@LastUpdated=" followed by date/time text allows updates to the file to be recognised, and thus prompt updates to dependent files.

To cope with regionalised channel names, a wildcard character (default "~") can be used in channel names. Using the notation that A & B are non-zero strings, the following constructs can be used:

- 'A~' Matches any string starting with A, whether or not there are subsequent characters.
- 'A~+' Matches A, but only if followed by one or more characters.
- 'A~+B' Matches any string starting with A and including B in the rest of the string.
- 'A~-B' Matches any string starting with A and not including B in the rest of the string.

The wildcard can be changed by inserting command "@Wildcard=" followed by the chosen character.

The commands "@IgnoreCases=On" causes the case to be ignored, and "@IgnoreSpaces=On" causes any spaces to be ignored when performing the name comparisons. The equivalent "=Off" commands have the opposite effect. The default states are Off. It may be possible to insert these at any point in the file to make the comparisons style unique to one (or a group of consecutive) channel(s), but this has not been tested so to be safe these commands should be inserted at the front of the file.

N.B. The "@" commands are case sensitive.

APPENDIX 4

CHANNEL ORGANISER FILES

This appendix summarises the files used by Channel Organiser are as follows:

1. "ChannelOrganiser.tap" – the TAP file – can be renamed but must end in ".tap" – can be placed in "/ProgramFiles/" or any subdirectory thereof (but in "Auto Start" if the auto scan feature is required). Cannot be changed by the user.
2. "Firmware.dat" – must be placed in "/ProgramFiles/" or "/ProgramFiles/Settings" – must not be renamed – see main text for source of updates.
3. "FvTxData.tsv" - must be placed in "/ProgramFiles/Settings" – is a "tsv" file that can be amended by the user – see Appendix 2. This file is not essential, but its use is recommended to avoid duplicated channels.
4. "Freeview.dat" – must be placed in "/ProgramFiles/Settings" – is a text file that can be amended by the user – see Appendix 3. This file is not essential for basic scanning and channel deletion, but its use is recommended ease channel deletion and allow updates of configuration files.

and those generated or updated by Channel Organiser as follows:

1. "ChannelOrganiserB2.ini" – in "/ProgramFiles/Settings" – defines menu settings used last time, regional variants, and current transmitter channel numbers – is text file with tightly defined syntax – will be regenerated if deleted.
2. "ChannelOrganiser Log.txt" & "ChannelOrganiser BootLog.txt" - in "/ProgramFiles/Logs" – text files listing major actions to help diagnose problems with manual and auto-at-boot operation – can be ignored otherwise.
3. "ChannelOrganiser History.txt" - in "/ProgramFiles/Logs" – a text file listing cumulative history of files changed etc by Channel Organiser.
4. "ChannelOrganiserDeletes.txt" - in "/ProgramFiles/Settings" – a text file listing channels to be deleted.
5. "TM_SvcldMap.txt" " - in "/ProgramFiles/Settings" – a text file used by the TopManager PC application for recognising LCN changes.
6. "ScanChannelData.tsv" - a tsv file listing key parameters of all channels found by a scan, only generated if "Record" is pressed at the channel status screen.