

# **MANUAL FOR THE “PHOTO MANAGER” TAP**

## **For Topfield TF5800PVRt**

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## 1 INTRODUCTION

This manual provides details on the installation and use of the **Photo Manager** Topfield Application Program (TAP) version 0.5. The primary aims of this TAP are the display of JPEG images and the playing of MP3 tunes. It enables flexible viewing of photos, and the potential fusion of this with music. It has been developed for the Topfield TF5800PVRt (hereafter “Topy”), but may work on similar Topfield models.

A reasonable understanding of computer folder structures is needed for installation of the TAP and the image files, but only a superficial knowledge for subsequent use. The installation instructions here are based on use of a Windows PC, but similar tools are available on Macs.

## 2 CONVENTIONS & ABBREVIATIONS

References to Topy remote control keys in the narrative text are in *italics*. References to specific **Photo Manager** or native Topy screens in the narrative text are in **bold**. Folder names are in single quotes ‘thus’, and any other specific terms are in double quotes “thus”.

The term “folder” is used throughout this manual and in the **Photo Manager** screens rather than “directory”, though the terms are synonymous. The abbreviation “**Back up**” is used in the **Photo Manager** screens to denote the link to the parent folder.

The functions of the most widely used keys are described at the bottom of each screen. A full list of keys used and their functions is given in section 10.

## 3 SETTING UP

### 3.1 TAP Installation

If you are unfamiliar with the installation and use of TAPs, it is suggested that you read the following introductions to TAPs and loading them from Windows PCs:

<http://www.topy.org.uk/documents/1-Introduction%20to%20TAPs.pdf>

<http://www.topy.org.uk/documents/Installing%20TAPs%20-%20Windows.pdf>

Download the TAP into your computer, and copy it onto the Topy using “Altair” into the ‘ProgramFiles’ or ‘ProgramFiles\Auto Start’ folder. In the latter case it will run automatically whenever the Topy is switched from “Standby”. To run the TAP from ProgramFiles (or after loading into Auto Start & before re-starting your Topy), use the Topy archive to highlight the TAP and press 'OK'.

If you have previously run another photo TAP on your Topy, it would be prudent to ensure that there are no files left over with the same names as used by Photo Manager files – see section 12 for details.

### 3.2 Photo Installation

All photos must be “JPEG” files, with file extension ‘.jpg’. Though the Topy file names are usually case-sensitive, ‘.JPG’, ‘.jPg’ etc are also acceptable. Images using “Progressive” encoding are not fully supported, and should be avoided. The term “photo” is used here to cover any JPEG file, though it could be some other form of image such as a diagram or computer generated art.

Before transferring your photos to your Topy, you need to decide on a folder structure. The relevant limits on size & numbers are given in section 11. If you do not wish to access the files from any other TAP, we suggest you use the Topfield Windows application “Altair” to establish a fourth top level folder called “Photos” or similar. Other TAPs may not recognise this, so if you wish to share photos between TAPs a new subfolder within “ProgramFiles” should be set up.

The structure below “Photos” (or whatever name you have chosen) will affect the way you can easily display **Slideshows**, in that a simple **Slideshow** consists of one folder or one folder and its all subfolders. The names will affect the order in which sequential slideshows display the photos. Remember that the Topy file & folder names are case-sensitive, so ‘Photos’ & ‘photos’ are different and can co-exist, but it would probably be wise not to take advantage of this. Appendix 2 gives more detailed guidance for beginners.

Having chosen your structure, you can set it up with Altair, and then copy the “.jpg” files from the PC. Alternatively, you can set up part of or all the folder structure on the PC and copy en-bloc.

Note that the native Topy **Archive** will not see any files or folders outside ‘MP3’, ‘ProgramFiles’, or ‘Data Files’. It will also not show any of the ‘.jpg’ files, but it will show their folders if below one of the three folders listed above.

### 3.3 MP3 Files

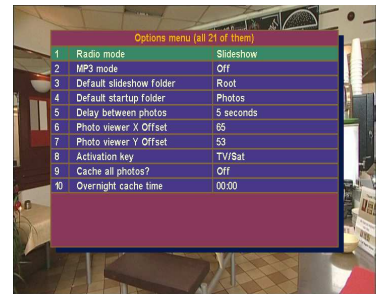
These must be installed in the Topy’s ‘MP3’ folder, or a subfolder thereof. Any MP3 files elsewhere will not be recognised by **Photo Manager**. Equivalent thought processes should be given to the MP3 folder structure as is given to ‘Photos’. All files must have extension ‘.mp3’, or ‘.MP3’, etc.

### 3.4 Activating Photo Manager

When run (manually or from ‘Auto Start’), **Photo Manager** stays in the background until it is activated. By default the activation button is 'Recall'. You will need to make sure no other TAPs you have running also use 'Recall' as the activation key, otherwise it will not be possible to activate **Photo Manager** (or the other TAP, if **Photo Manager** is loaded first). Once you have activated **Photo Manager**, you can re-configure the activation key to TV/Sat, Slow Motion, Mute, or TV/Radio by means of the **Options Menu** (item 8) if you wish.

### 3.5 Options Menu

The **Options Menu** allows various aspects of **Photo Manager** to be customised to suit individual user needs. It can be accessed by pressing the *Menu* key in most screens. A full list of the parameters, a summary of their function, and the default values are given in Appendix 1. To change an item, use *Up/Down* to select the item, and then *Left/Right* to choose the value you require. The settings are automatically saved on exit from the **Options Menu**.



## 4 PHOTO CACHING

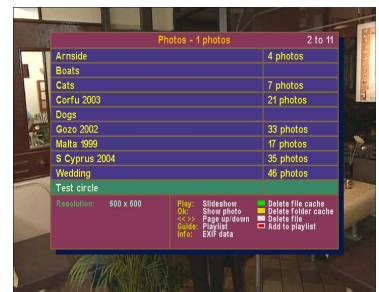
To speed up the display of photos and reduce memory requirements, a cached version is generated with the correct resolution etc, and a thumbnail is generated. These processes can take many seconds per photo (depending on the resolution of the original), but subsequently the photo is displayed almost instantaneously. The new files for the photos in subfolder “x” are held in a new subfolder “x/cache”. The methods of caching, and associated options are discussed in Appendix 3.

## 5 VIEWING PHOTOS

### 5.1 Basic Use

Once **Photo Manager** is activated, you will be presented with the **File List View** screen. This starts off by listing photos and folders in the “Default Start Up Folder”, with the parent folder (‘Back up’) and the first 8 other files or folders visible. Folders are shown if they contain photos or sub-folders, whether or not the sub-folders contain photos. The right hand column indicates:

- For folders, the number of images in that folder. No indication implies that there are subfolders, which may or may not contain images.
- For photos, if caching completed, the photo resolution will be displayed in pixels.
- If a file has been selected for the **Playlist** (see section 8), “Playlisted” will replace the photo resolution.



To move through these and any others off the screen use the *Up*, *Down*, <<(page down), and >>(page up) keys. The currently selected file is indicated by a green background. From here you can navigate to any other folder on the Toppo by selecting the relevant folder, and pressing *OK*.

If you stray into the MP3 folder or any of its sub-folders, the list of “.mp3” files will be displayed, and “.jpg” files ignored. At no time are files other than “.jpg”, “.mp3”, or “photo.log” (see section 0) shown.

The left and right keys are special shortcut keys, with the following effects:

- *Left*: Returns you to the parent folder irrespective of where the highlight is.
- *Right*: Changes directory in the same way that pressing 'Ok' does (i.e. only when the folder is highlighted).

The menu at the bottom right of the screen explains the principal key presses, and the panel on the left shows the key EXIF parameters (see Appendix 4).

If you select a photo and press *OK*, then this photo is displayed in the **Photo Viewer** screen. This shows:

- The photo image surrounded by a yellow frame.
- The photo file name.
- The functions of the keys most frequently used when in this view.



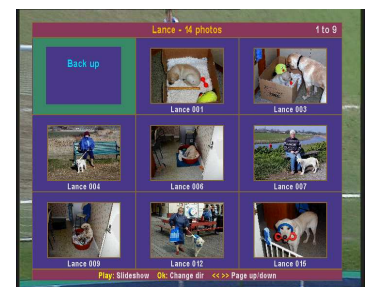
To return to the **File List View** from the **Photo Viewer** screen, press *Exit*.

Press *Exit* when in **File List View** to close **Photo Manager**. The Topy then returns to its normal state and **Photo Manager** will wait until the activation button is pressed again. If reactivated before exiting the TAP (e.g. by going to Standby), **Photo Manager** will revert to the last-used rather than default folder.

## 5.2 Thumbnail View

An alternative list-like presentation is available instead of the **File List View**, called **Thumbnail View**. The facilities & controls are the same, except that the *Left* & *Right* keys navigate round the images. There is a menu of the principle key options along the bottom of the image.

Pressing *Recall* toggles between the two views. **N.B.** Changing the activation key does not affect the use of *Recall* for this purpose. The last selected view is used until **Photo Manager** is closed completely (e.g. by going to Standby), after which the default **File List View** is used until *Recall* is used to select the **Thumbnail View**.



### 5.3 Full Screen View

An alternative presentation is available instead of the **Photo Viewer**, called **Full Screen View**. The facilities & controls are the same, except that:

- The picture occupies almost the full screen either vertically or horizontally, depending on the photo aspect ratio.
- No information about the photo is displayed, nor are the boxes round the image.



Pressing *Recall* toggles between the two views. The last selected view is used until Photo Manager is closed completely (e.g. by going to Standby), after which the default **Photo Viewer** is used until *Recall* is used to select the **Full Screen View**.

### 5.4 Slideshows

The basic **Slideshows** are started by pressing *Play* in the **Thumbnail**, **File List**, or **Photo Viewer** screens. If *Play* is pressed when a folder is highlighted, then all photos within that folder are shown (including subfolders if selected), but if a photo is highlighted then all photos in the current directory are shown (not including subfolders). The **Photo Viewer** screen then cycles round all the photos in the current folder irrespective of the file currently selected until *Exit* is pressed. The **Options Menu** allows three parameters to be controlled as follows:

- “Delay Between Photos” (item 5, default 5 seconds).
- “Slideshow Play Mode” allows selection of sequential or random order (item 15, default sequential).
- “Include Subfolders” allows inclusion, or otherwise, of photos in subfolders of the current folder (item 17, default exclusion).

In the sequential mode, the order is alpha-numeric folders and then alphanumeric filenames – see Appendix 2 for more details. There is a limit of 4096 photos for all **Slideshows** – if more have been selected the remainder will be ignored.

Pressing *OK* when in a **Slideshow** takes you back to the photo directory you came from or the default slideshow directory if the **Slideshow** was started from **Radio** or **MP3 Modes** discussed below. *Exit* always takes you back to where you came when you started the slideshow (apart from Radio mode which has no origin so takes you to the default slideshow directory).

A more sophisticated **Slideshow** is available via the **Playlist** feature described in section 8.

## 5.5 Widescreen TVs

An uncorrected Toppo display occupies the whole screen width, irrespective of the TV aspect ratio, and therefore a correction factor is needed when using a TV in widescreen mode to avoid stretching the photo images. One can either:

- Ensure the TV is in 4:3 mode, and thus avoid the special correction factor.

or:

- Ensure the TV is in 16:9 mode, and apply a special correction factor to the images in **Photo Manager**.

The former may give marginally better images on an analogue CRT TV at the expense of smaller menus etc, but it suggested that you see which suits you and your TV best.

Normally the Toppo will signal the aspect ratio of the current program to the TV, and a change could occur during your use of **Photo Manager** (most likely on commercial channels, where adverts may use a different aspect ratio from the programmes). It is therefore recommended that you select the desired aspect ratio using either by repeatedly pressing the Toppo's zero key, or using the TV aspect ratio controls.

The correction factor for widescreen modes forms **Options Menu** item 11. It should be set to 0 for 4:3 TVs and 33 for 16:9 TVs. Changes to this setting do not require photos to be re-cached. The correction factor can also be used to offset some types of distortion on your TV, but remember that any non-zero corrections will degrade the image so you may prefer to put up with the distortion.

## 5.6 More Advanced Features

Pressing *Info* in the **Thumbnail** or **File List** views displays the whole of any "EXIF" data associated with the currently selected photo – see Appendix 4.

The positions of the images on the **Photo Viewer** screen and **Thumbnail View** can be adjusted using separate X & Y offsets which form part of the **Options Menu**. The ideal values will depend on your television.

The "Default Start up Folder" can be changed via the **Options Menu** (item 4). We suggest this is changed to the top level photo folder, but if one folder is used much more than others you may wish to change to that instead. Note that it can only be changed to Root, a folder in Root that contains '.jpg' files, or any sub-folder of 'ProgramFiles' which contains either '.jpg' files or further sub-folders.

## 6 RADIO MODE

### 6.1 Basic Operation

If the relevant **Options Menu** (item 1) is set to "Slideshow", a **Slideshow** will be started whenever the Radio is selected for normal Toppo operation. This does not require separate activation, and overrides any MHEG data that would normally be displayed with the radio programme. The **Slideshow** is controlled by the choice of "Default Slideshow Folder" (**Option Menu** item 3), together with the standard **Slideshow** controls of "Time Between Photos" (item 5), "Include Subfolders" (item 17), and "Slideshow Play Mode" (item 15) as described in section 5.4. One of the "Default Slideshow Folder" options is to use the **Playlist**, which appears as a pseudo folder as you scroll through the available folders. To revert to normal Toppo operation while listening to radio programmes, set item 1 to "Off".

## 6.2 Channel Selection & Reversion To TV Viewing

The current radio channel appears at the top of the **Photo View** screen. The *Ch+* & *Ch-* keys can be used to change radio channel without interrupting the slideshow, providing you are using the “Remote Extender” TAP.

Reversion to TV, and thus closing of this mode, can be achieved by pressing *TV/Radio* when in **Photo View** or **Full Screen Views**.

## 6.3 Screensaver Modes

Item 1 on the **Options Menu** can also be set to one of 5 “Screensaver” modes. These display the same images in the same order as a normal **Slideshow**, but with the following special effects:

- Screensaver 1 (Thumbnails): The thumbnail images are randomly placed in one of sixteen positions, so it takes some time to fill all image positions and the duration before any image is overwritten is random.
- Screensaver 2 (Slow Reveal): The images are slowly revealed (alternately from top to bottom and bottom to top) on the screen.
- Screensaver 3 (Enlarger): Alternate images either start small & are stepped up in size, or start large and are stepped down in size.
- Screensaver 4 (Inside Out): Alternate images are either gradually uncovered from the centre outwards or the outside inwards.
- Screensaver 5 (Jigsaw): The image is divided into 16 rectangles which are uncovered in a random order.

These automatically select **Full Screen View**. Pressing *Recall* cycles through these three effects (and “Album Art” when in MP3 mode – see below). Try them out to see which one you like! Note that in case 2 & 4 keypresses will not be actioned until the photo is fully revealed.

## 7 MP3 PLAYER

### 7.1 Playing MP3s

An MP3 player has been built into **Photo Manager**. MP3's are selected using either the **File List** or **Thumbnail** views, except of course you will be looking for files with “.mp3” file extension. The navigation, play, and selection rules are those for photo viewing. You can browse to the MP3 folder(s) and play individual songs using *OK*, or all songs in a folder (sequentially or randomly according to **Options Menu** item 16) using *Play*. Additionally, pressing *Red* skips to the previous track, pressing *Blue* skips to the next track. In the **File List View**, any ID3 tag data associated with a selected MP3 is displayed in the area used for EXIF data on photos.



Even if an individual track is being played (by pressing 'Ok'), you can still skip to the next track. Once the skip has been done, then it carries on playing as if 'Play' was pressed. If no skip was done, then at the end of the MP3 playback stops.

The MP3 mode can also be accessed by pressing *TV/Sat* if an MP3 is playing and you are in the File List/Thumbnail screen. if an MP3 is playing and you are in the File List/Thumbnail screen.

## 7.2 Associated Slideshows

Optionally (according to **Options Menu** item 2) you can get a **Slideshow** to start automatically when an MP3 starts, using the same default folder and playing rules as for **Radio Mode**. As with **Radio Mode**, there is a choice of the simple slideshow or one of 5 screensavers, but the MP3 mode also allows selection of "Album Art" where any art contained within the MP3 file currently being played is displayed together with any ID3 tag information.

Alternatively, having started an MP3 you can just browse to any photo folder and view a photo or start a **Slideshow** manually. When listening to an MP3 and with a photo in the **Photo Viewer** screen, pressing *OK* returns you to the current MP3 folder. Pressing *Exit* returns you to the current photo folder. These buttons also work in the **Photo Viewer** screen if an MP3 folder has been selected for playing.

While playing an MP3 and viewing photos, the **Photo View** includes a display of the song title & artist (if available from ID3 tag data), and progress in the form of minutes & seconds played out of minutes & seconds total for the current track.

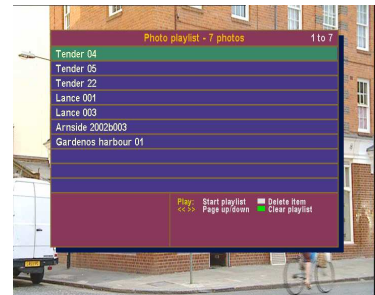
The *Red* & *Blue* skip functions continue to work during MP3 slideshows.

## 8 PLAYLISTS

You can maintain one **Playlist** for photos and one for MP3s, which will be initially blank . Adding items to the **Playlist** is done from the **File List** or **Thumbnail Views**. Press *Record* after selecting an MP3 or photo to add it to the relevant list. Press *Record* on a folder to add all items in that folder to the list. When using the **Thumbnail View**, the word "Playlisted" will appear above the top left hand corner of the thumbnail until it is deleted from the **PlayList**, and in **File List View** "Playlisted" replaces the image size. If you have "Include Subfolders" turned on (**Options Menu** item 17), then all items within any subfolders will also be added. A maximum of 512 items can be added to each **PlayList**. The **PlayLists** are stored on the Toppo's hard disc, so are not forgotten when you go to Standby.



To bring up the **Playlist** window, press 'Guide' when in the **File List** or **Thumbnail View** screens. The **Playlist** window lists all the files in the current **Playlist**, in the order in which they will be played if the Sequential option (item 15) is selected. The relevant control keys are:



- Play:* Play the entire Playlist.
- Ok:* Play/show the currently selected single MP3 or photo.
- Left/Right:* Toggle between photo and MP3 **Playlists**.
- White:* Delete item from **Playlist**.
- Green:* Clear entire **Playlist**.
- Exit/Guide:* Return to **File List** or **Thumbnail View**.

It is not possible to re-order the list other than by deletion and re-addition.

Once a **Playlist** is being played, the display & controls are just as a normal **Slideshow**.

## 9 LOGGING

If you turn logging on, then a file called "photo.log" will be written to during the use of this TAP. This may prove useful if the overnight caching is failing, since it should inform you which photo is troublesome. The log is written to the "ProgramFiles" folder. With the **File List** or **Thumbnail View** screens, it can be viewed by browsing to it and pressing *Ok*. To view the log, logging must be turned off. Two logging levels can be chosen. If "Verbose" logging is turned on, then beware that this may slow down normal operation.

## 10 CONTROLS SUMMARY

### 10.1 General

The following sections summarise the effect of the different controls according to the screen currently displayed.

### 10.2 File List/Thumbnail Views

- Recall:* Toggle between the two different views
- OK:* Navigate to the highlighted folder, display the highlighted photo, or view log file.
- Up/Down:* Move selection by one
- Left/Right:* **Thumbnail View:** Move selection by one ( only)
- Left:* **File List View:** Returns you to the parent folder irrespective of where the highlight is.
- Right:* **File List View:** changes directory in the same way that pressing 'Ok' does (i.e. only when the folder is highlighted).
- <</>>:* Move selection by one page Up/Down
- Play:* Start a slideshow of all photos in this folder.
- Menu:* Display the **Options Menu** screen.
- Guide:* Bring up **Playlist** screen.
- Record:* Add current file or folder to the MP3 or photo **Playlist** as appropriate.
- Yellow:* While browsing a folder containing cached photo data, will delete all the cached data in that folder.
- Green:* Delete all cached data associated with currently selected photo.
- Info:* Display EXIF data on the currently highlighted photo

*.Exit:* Exit screen and return Topfield to its normal state.

### 10.3 Photo Viewer & Full Screen View

*OK:* While listening to MP3, returns you to wherever you came from. It will also highlight the currently viewed photo, or currently playing MP3 if it happens to be in the folder you came from.

*Pause:* When in a **Slideshow**, pause on the currently displayed photo.

*Recall:* Normal Operation: Toggles between **Photo Viewer & Full Screen View**.  
Radio/MP3 Screensaver & Album Modes: Toggles between modes.

*Play:* Restart the **Slideshow** if it is paused.

*Left/Right:* Show previous/next photo.

*Rew/FF:* Rotate the currently displayed photo.

*Red/Blue:* While listening to an MP3, skips back/forward one track

*Exit:* Return to the **File List** or **Thumbnail View** (according to which last used).

### 10.4 PlayList

*Play:* Play the entire **Playlist**.

*Ok:* Play just the currently selected MP3 or photo.

*Left/Right:* Toggle between Photo and MP3 **playlists**.

*Menu:* Display the **Options Menu** screen.

*White:* Delete item from **Playlist**.

*Green:* Clear entire **Playlist**.

*Exit or Guide:* Return to **File List** or **Thumbnail View** (according to which last used).

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## 11 LIMITS

The maximum number of folders supported is 1024, and the maximum files per folder is 512. Only folders, JPEG files, MP3s or the photo.log count towards the latter limit. Any excess will be ignored. The maximum folder path length is 256 characters.

## 12 PHOTO MANAGER FILES

**Photo Manager** may generate the following files in The 'ProgramFiles' folder:

- "photo.ini", containing the current options settings. If deleted, all settings will revert to the defaults as detailed in Appendix 1, and a new file generated.
- "photo.log", if logging has been enabled – see section 0. If deleted, a new file will be generated next time logging is enabled.
- "photo.pl", when a photo **Playlist** is generated. Deleting the file is equivalent to emptying the **Playlist**.
- "mp3.pl", when an MP3 **Playlist** is generated. Deleting the file is equivalent to emptying the **Playlist**.

If any files with these names exist from another TAP, they should be deleted before running **Photo Manager**, but versions from earlier versions of **Photo Manager** can be left.

In case of problems, it is suggested that you keep a back-up copy on "photo.ini" and the ".pl" files (if used) on your computer.

## 13 OTHER INFORMATION

### 13.1 General

The information provided here does not easily fit into the flow of this document, but may be of use to understand the details of Photo Manager operation (particularly for the more sophisticated user).

### 13.2 Unused Key Presses

Keys that are not used by Photo Manager are not passed on to other TAPs or the native Tappy functions, with the exception of when in the Radio Slideshow mode and the user presses *TV/Radio* to revert to TV viewing.

### 13.3 “Random” Selections

When viewing JPEGs or listening to MP3s in random mode, **Photo Manager** remembers the last 512 items played, so as not to have repeats. It is also possible to skip back to previous JPEGs/MP3s in random mode (as far as the history allows, so if you have viewed 512 photos randomly, you will be able skip back through those 512 in the same order). As you skip back, it deletes the last entry from the history, so you cannot go forward again in the same order. If you have less than 512 items to play, once they are all viewed/listened to, the history is deleted and it starts again.

## 14 PROBLEMS & FEEDBACK

In the event of problems with decoding photos, consult Appendix 3.

Problems with locking up or crashing could be due to corrupted files – try deleting all those listed in section 12, and replacing with a back-up copy if you have one.

Assistance with problems with **Photo Manager**, may be obtained directly from the author’s web site:

<http://www.mark.riley.dsl.pipex.com/toppymytaps.shtml>

or (for members) via the Tappy.org.uk forum at :

<http://www.tappy.org.uk/forum/viewtopic.php?t=3368>

Reports of errors or omissions in this document, of bugs, or any suggestions for improvements would be welcomed via either route.

# APPENDIX 1

## OPTIONS MENU

1. Radio slideshow:  
If 'On' then a **Slideshow** is started whenever a radio channel is selected (see section 6). The default value is Off.
2. MP3 Slideshow:  
If 'On' then start a **Slideshow** whenever an MP3 file is played (see section 7). The default value is Off.
3. Default Slideshow folder:  
Choose a photo folder for the Radio & MP3 slideshows (see section 6). Note that this can only be set to the root folder, one of the folder in Root, or one of the folders at the next level down, and then only if they contain '.jpg' files The default value is 'ProgramFiles'.
4. Default Start Up Folder:  
Choose the folder to be used when **Photo Manager** is first loaded, and has a default setting of 'ProgramFiles'. Note that this can only be set to the root folder, one of the folder in Root, or one of the folders at the next level down, and then only if they contain '.jpg' files. See section 5.1.
5. Delay between photos:  
Delay in seconds between photos in **Slideshows**, with a default value of 5. See section 5.4
6. Photo Viewer X Offset:  
Adjust the x coordinate of the **Photo Viewer** screen, in pixels, with a default value of 65. See section 5.5.
7. Photo Viewer Y Offset:  
Adjust the y coordinate of the **Photo Viewer** screen, in pixels, with a default value of 53. See section 5.5.
8. Activation key:  
Select between *Recall* (the default), *TV/Sat*, *Slow Motion*, *Mute*, & *TV/Radio* keys for activating **Photo Manager**. See section 3.4.
9. Cache All Photos  
Choose between Off, Overnight, or On Close. "Off" is the default setting. See section 4.
10. Overnight Cache Time  
Choose a time between midnight and 6 in the morning. If option 9 is set to "overnight" and the Topyy is not in standby, this caches all the photos it finds on the hard drive (and creates the thumbnails too). See section 4.
11. Widescreen squash factor:  
Correction factor for widescreen displays - a value between 0 and 100. The higher the value, the more the photo gets squashed. Should be 25 for 16:9 and 0 for 4:3. The default value is 0. See section 5.5.
12. Logging On/Off  
The default setting is "Off" - see section 0 for details of the logging facilities.
13. Logging level:  
Select "Scant" or "Verbose" as required when logging has been selected – otherwise the setting has no effect. "Scant" is the default value. See section 0.
14. JPEG decoding engine:  
Choose whether to use the original Topfield decoding engine, or Wembley's newer version. See section 5.5. The default setting is Wembley's.
15. Slideshow Play Mode:  
Select "Sequential" or "Random" as required. "Sequential" is the default setting. See section 5.4.
16. MP3 Play Mode:  
Select "Sequential" or "Random" as required. . "Sequential" is the default setting. See section 7.

17. Include Subfolders:  
If this is turned on, then when pressing *Play* on a folder of MP3s or photos, the contents of all subfolders will also be played. "on" is the default setting. See section 5.4
18. Thumbnail List X Offset:  
Adjust the x coordinate of the **Thumbnail List** screen, in pixels, with a default value of 50. See section 5.5.
19. Thumbnail List Y Offset:  
Adjust the y coordinate of the **Thumbnail List** screen, in pixels, with a default value of 27. See section 5.5.
20. Auto adjust brightness:  
Selecting "On" is intended to help reduce flickering of photos on some TVs. . "Off" is the default setting. See section 5.5.
21. Exit TAP:  
Press OK after selecting this item to exit the TAP completely

## APPENDIX 2

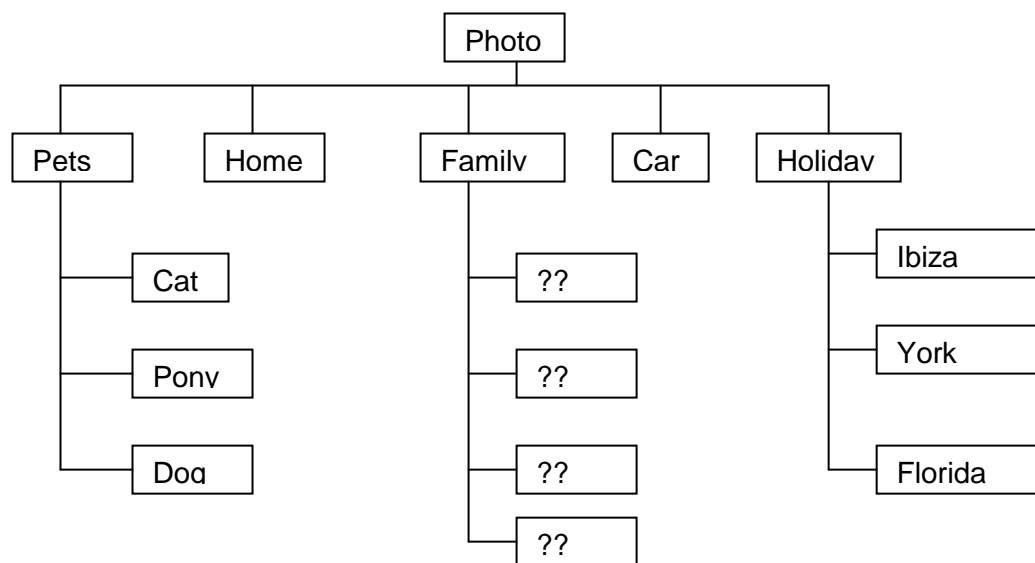
### FOLDER STRUCTURE AND FILENAMES

#### 1 GENERAL

The sequential slideshows allow display of all photos in a folder and its subfolders (see main text section 5.4). The folder structure will therefore determine which groups of photos can be displayed in a simple slideshow without resorting to the extra effort of setting up the **Playlist** (section 8 refers). The order of sequential play is determined first from an alpha-numeric sort of folders names, and then an alpha-numeric sort of filenames within each folder. This appendix gives guidance on the selection of folder structure and file names.

#### 2 FILE STRUCTURE

To enable slideshows of groups of related topics, a large number of photos are best divided into folders and subfolders according to their subject matter. Thus you might like a folder structure something like:



which will readily give slideshows of individual pets, individual holidays, combined pets, or combined holidays.

If the order of holidays in the combined holiday case is considered important, it might be better to put the year before the place. With the names shown the sequential display order will be Florida, Ibiza & then York.

Each of the folders shown above could have several subfolders, which could then be further subdivided again & again.

### 3 SORT ORDER

In some cases, such as someone growing up or a travelling holiday, the order of presentation is important, so folder and file names must be chosen to ensure you get the desired order.

The sort order for folders & files within folders is based on the ASCII value associated with each character, taking account of whether it is upper or lower case. Thus the order of precedence of commonly used characters is:

- Space
- Dash
- Full stop, including that in '.jpg'
- 0-9, in that order
- A-Z in that order
- Underscore
- a-z in that order

Note that this order differs from that in Windows Explorer, which ignores the difference between upper & lower case, and treats spaces, dashes & underscores differently. The following table illustrates the different way a group of files are sorted:

<u>Photo Manager</u>	<u>Windows Explorer</u>
Z.jpg	test.jpg
test.jpg	x1.jpg
x .jpg (with space)	x2.jpg
x-u.jpg	x11.jpg
x.jpg	x .jpg (with space)
x1.jpg	x.jpg
x11.jpg	x_u.jpg
x2.jpg	xa.jpg
x_u.jpg	xb.jpg
xE.jpg	xE.jpg
xa.jpg	x-u.jpg
xb.jpg	xz.jpg
xz.jpg	y01.jpg
y01.jpg	y02.jpg
y02.jpg	y10.jpg
y10.jpg	Z.jpg

It is therefore suggested that:

- When numbering, insert leading zeros so you have 01 to 99 or 001 to 999.
- Be consistent about use of spaces, dashes & underscores after names etc, so you have 'Fred 01.jpg' & 'Fred 02.jpg', not 'Fred\_01.jpg' & 'Fred- 02.jpg'.
- Be consistent about use of capitals – e.g. not 'Fred 01.jpg' & 'FRED 02.jpg'.

in which case the Windows and **Photo Manager** orders should match.



## APPENDIX 3

### CACHING AND PHOTO PROCESSING OPTIONS

#### 1 CACHING

##### 1.1 Initiation

As indicated in the main text, caching is a pre-requisite for viewing photos. Three methods are available for generating the cache versions of your photos:

1. As an overnight task, requiring the Topy to be left switched on.
2. On closing the TAP using the *Exit* key, NOT with the last **Options Menu** item or by setting the Topy to Standby.
3. On the first time a photo is selected for viewing.

The first two are controlled via the **Options Menu** items 9 & 10.

Method 3 will apply to any photo that has not been cached when it is first selected for viewing. On completion of caching the first in a folder, decoding of the next file in that folder is started on the basis that they are likely to be viewed next. However please note that when this method is used the resolutions of the files are not stored for display in the **File List View**, so use of one of the other methods is recommended.

Note that during caching operations the Topy is likely to be very slow at responding to remote controls. It is therefore recommended that:

- You do not use the **Radio & MP3 Modes** until caching of at least the relevant files has been completed.
- You do not use method 2 if you want to continue to use the Topy for other purposes.

Also, a warning on the overnight caching - if you have many photos (say > 3000) at a reasonably high resolution, then the job may take a very long time indeed. If you find the Topy is responding sluggishly the next day, then the job might still be running.

##### 1.2 Processing Options

Two items in the **Options Menu** affect the cached files, so these should be reviewed before initiating a caching process (either directly or by viewing photos). These are the choice of decoding engine (item 14) and "Brightness Auto Adjust" (item 20) which are discussed below. Changing these selections after caching will have no effect until re-caching is performed. Repeating the caching process is recommended when upgrading from version 0.4 (or earlier) of **Photo Manager**. It is also essential if a new version of a photo is loaded into the Topy without changing the name. To support re-caching, the *Green* and *Yellow* keys are used to delete all caches for the current photo and current folder respectively (**N.B.** The "Include Subfolders" option does not make the Yellow key delete the caches in any subfolders).

### 1.3 Decoding Failures

If the decoding process fails no thumbnail image will be generated, and if you attempt to view the photo you will see a “x.jpg failed to decode” message when you try to view the relevant photo. The most likely reasons for failure are:

- “Progressive” encoding of the JPEG, particularly when using Wembley’s decoder.
- Inadequate memory, particularly for photos of 4 MPixels or more.

The encoding type forms part of the EXIF data displayed in the **File List View**. If this indicates “Progressive”, either re-save the image using “Baseline” encoding in an image processing program on your computer, or try the Topfield decoding engine for the offending photo(s).

If a “Baseline” encoded image fails to load, try closing down all other TAPs to increase available memory, the other decoding engine, and/or reducing the resolution in an image processing program. The available memory can be monitored using the “Memory Watcher” TAP, or by studying the Verbose log file.

## 2 CHOICE OF JPEG DECODERS

### 2.1 Introduction

This TAP can use either the Topfield JPEG decoding engine, or an overhauled version of Wembley’s decoder. The alternatives are discussed below.

### 2.2 Topfield Decoder

The Topfield decoding engine appears to have a number of bugs, which lead to unreliable decoding and sometimes producing incorrect image sizes. It does, however, attempt to process “Progressive” scan images.

The first time a photo is displayed, it needs be loaded in its entirety. Using the Topypy JPEG decoder, large photos can take a large amount of memory. The biggest photos tried are 4 MegaPixels and these take approximately 7 MegaBytes of memory to load.

### 2.3 Wembley’s Decoder

The original version of Wembley’s decoder used large amounts of memory. For example a 2 Megapixel photo would require approximately 10 MB of memory to decode, and a 5 Megapixel photo would require a mammoth 28 MB (beyond the capability of the Topypy). In addition it would not handle monochrome images.

The author of **Photo Manager** has radically overhauled this decoder to reduce the memory requirements, tidy up the error handling so any photos it cannot decode should fail gracefully, and decode monochrome photos. It has been tested with up to 3 Megapixel images, requiring no more than 5 Mbytes of memory. With the exception of not handling “Progressive” scans, testing to date have found no problems.

We strongly recommend the Wembley version of the decoding engine, which is now the default, since it decodes a wider range of JPEGs. However this is a big change, so any feedback will be gratefully received.

### 3 BRIGHTNESS AUTO ADJUST

If this is turned on, then when the JPEG is initially decoded, **Photo Manager** tones down any bright white areas. Hopefully this will help reduce flickering of photos on some TVs. This only works if the photo has not yet been cached and contains significant areas of white. It is fairly experimental, so just give it a go and see what happens.

## APPENDIX 4

### EXIF INFORMATION

JPEGs can have useful information embedded within the file. This information is called EXIF data (Exchangeable Image File) . If your JPEG was taken with a recent digital camera, then it will almost certainly contain EXIF data. However, if you have edited the photo in any way, this data may have been lost. The table below shows the various fields in the EXIF data and whether they are supported by **Photo Manager**:

<u>Field</u>	<u>Supported By Photo Manager?</u>
Description	N
Related sound file	N
Photo Date	Y
Digitized Date	N
Orientation	Y
Copyright	N
Aperture	Y
Max Aperture	N
Light Source	Y
Focal Length	Y
Subject distance	Y
Camera model	Y
Camera make	Y
Camera software	N
Exposure program	Y
Exposure Bias	Y
Exposure time	Y
Exposure Index	N
Exposure FNumber	N
Shutter speed	Y
Image width	Y
Image height	Y
Image brightness	Y
Compressed bits/pixel	N
Resolution units	(Always pixels)
X resolution	Y
Y resolution	Y
Progressive/Baseline Scan	Y

The display of EXIF data by **Photo Manager** is shown by this screenshot:

