



GSAK (Geocaching Swiss Army Knife)

This document was created for the Speed Caching Event - Hints and Tips (<http://coord.info/GC4291W>) event. The intention is to give an introduction to GSAK version 8.2.x and although a lot of information will still work for other later versions, care should be taken.

GSAK only runs on Windows operating systems (2000, XP, Vista and Windows 7). I have not tried GSAK on any other operating system and difference may occur if this is attempted due to the way that GSAK works internally.

This document does not go into downloading and installing of GSAK as this is dependent on the version of the Windows in use. If anyone does require help on this, please contact me via my Geocaching.com profile.

If you wish to contact me, you can do so through my Geocaching.com profile (The Tares Clan).

Table of Contents

1	What is GSAK	5
1.1	Major Features.....	5
1.2	Licencing	5
2	Screen Elements	7
3	Initial Configuration	8
4	Data	10
4.1	Loading PQs.....	10
4.2	API.....	12
5	Main Screen	15
5.1	Split Screen	15
5.2	Code Colouring.....	16
5.3	Child Waypoints	16
5.3.1	Grab Coordinates	17
5.4	Views.....	17
5.4.1	Selecting Columns	18
5.5	Status Bar	18
5.6	Grid Area	19
5.7	Sorting.....	20
6	Filtering.....	21
6.1	General Tab.....	21
6.2	Dates Tab	23
6.3	Other Tab	23
6.4	Examples.....	24
6.5	Caching along a route.....	25
7	Databases	27
7.1	Create a database	27
7.2	Adding data to the database	27
7.2.1	User Notes.....	28
7.2.2	Corrected Coordinates	29
7.3	Exporting Data	30
7.4	Send Waypoints	30
8	Configuring the Toolbar	33

9	Geocaching.com API and GSAK	34
9.1	Authorising GSAK to use Geocaching.com	34
9.2	Get Geocaches	35
9.3	Publish Logs.....	35
9.3.1	Publish Logs Settings	37
9.3.2	Templates.....	37
9.3.3	Logging	39
9.3.4	Refresh cache data	41
9.3.5	Get recent logs	41
9.3.6	Status Check	41
10	Macros	42
10.1	Useful Macros	42

Table of Figures

Figure 1 - Screen Elements.....	7
Figure 2 - General Options	8
Figure 3 - Setting Locations.....	9
Figure 4 - Advanced Settings.....	9
Figure 5 - PQ/GPX Load dialog	10
Figure 6 - PQ Loading	11
Figure 7 - Summary Box	11
Figure 8 - Get Geocaches from Geocaching.com	12
Figure 9 - Get Geocaches - Basic Tab	13
Figure 10 – Get Geocaches – Advanced Tab	13
Figure 11 - Main Screen	15
Figure 12 - Split Screen Format	15
Figure 13 – DualMaps	16
Figure 14 - A Child Waypoint	16
Figure 15 - Child Waypoint detail.....	16
Figure 16 - Child Waypoint example	17
Figure 17 – Columns	17
Figure 18 - Adding Columns	18
Figure 19 – Sorting.....	20
Figure 20 - Filters	21
Figure 21 - Filter - General Tab	21
Figure 22 - Dates Filtering	23
Figure 23 Filtering Others Tab.....	23
Figure 24 - Filter on Owner Name.....	24

Figure 25 - Filter on Cache and Container	24
Figure 26 - Filtered Results	24
Figure 27 - Status Bar	25
Figure 28 - Found Status	25
Figure 29 - Logs to search	25
Figure 30 - Logged by	25
Figure 31 - Arc/Poly drawing.....	25
Figure 32 - Arc/Polygon Route Planning	26
Figure 33 - Create a database	27
Figure 34 - Cache Right Click Options.....	28
Figure 35 – Notes.....	28
Figure 36 - Corrected Coordinates	29
Figure 37 - Map showing corrected coordinates	30
Figure 38 – Export Data	30
Figure 39 – Configure GPS.....	31
Figure 40 - GPS Setup.....	31
Figure 41 - Send Waypoints to GPSr	31
Figure 42 - Customise Toolbar	33
Figure 43 - Geocaching.com Login	35
Figure 44 - Allow Access.....	35
Figure 45 - Publish Logs - Fetch.....	36
Figure 46 – Publish Logs – Populated Grid	36
Figure 47 – Templates.....	38
Figure 48 - Template Example	38
Figure 49 - Populated Template.....	38
Figure 50 - Publish Logs Main Screen.....	39
Figure 51 – Trackables	40
Figure 52 - Publish Logs Confirmation.....	41
Figure 53 – Macros	42

1 What is GSAK

GSAK stands for Geocaching Swiss Army Knife and it is a product which is an all in one Geocaching and waypoint management tool which runs on Microsoft Windows operating systems such as Windows XP and Windows 7. It is offline database program and has the ability to use database commands directly.

It allows you to import Geocache information via various methods and then manipulate it in many ways which can be a benefit you when searching for caches.

IMPORTANT	To get the best use of GSAK, you require a Premium Membership at Geocaching.com. Everything will still work if you are a standard member but you will be severely limited in updating information. This is not a limitation of GSAK but something that is enforced by Groundspeak.
-----------	--

1.1 Major Features

The following are some of the major features of GSAK that all cachers are likely to find useful. There are many other features which can be used but are more likely to be needed by a more advanced GSAK user.

- Multiple databases (You can have ne for your finds, your puzzles solved caches, caches near your work etc)
- Sending/receiving waypoints to GPSr/smartphone/tablet
- Extensive filtering, sorting, and searching capabilities
- Backup and Restore
- Customised statistics pages (which can be automatically sent to Geocaching.com)
- Custom URL's for each waypoint, and waypoints as a group.
- Export to many formats allowing you to use GSAK data in other programs
- Add "corrected coordinates" to any waypoint
- User Notes. You can also import and export notes in text format
- Ability to set centre point for calculation of distance and bearing
- Backup and restore of databases and settings
- Split screen view with 7 formats: full waypoint display, google maps, details only, full logs only, log summary, online page, or child waypoints.
- Extendable via an extensive macro language (Macros can be downloaded for free from the GSAK website)

1.2 Licencing

GSAK is a commercial program but you are able to download and use it for 21 days with full functionality. You may still use GSAK after 21 days but you will get a nag screen which takes longer and longer to disappear.

If you wish to remove the nag screen, registration is required but the author (Clyde England) has been very generous with the licencing of it. Registration costs \$30 US Dollars (approx. £19 at time of writing this document) but this is a one off fee for a particular major version. Once paid your current version of GSAK is registered for life. Also, all updates to the current major version are free. For example, if you paid for a version 8 registration, version 8.1, 8.2, 8.3, etc will all be free.

When Clyde releases a new version, there will be an upgrade cost. However, Version 7 was released on the 30th January, 2007 and Version 8 on 9th November, 2011 so you got approximately four years for your registration cost.

In addition, you can install GSAK on multiple computers and use with multiple GPSrs that you own with one license and all settings, databases, etc can be moved between computers without any problems.

2 Screen Elements

It is important to understand the various parts of the GSAK screen as I will be using the terms throughout this document.

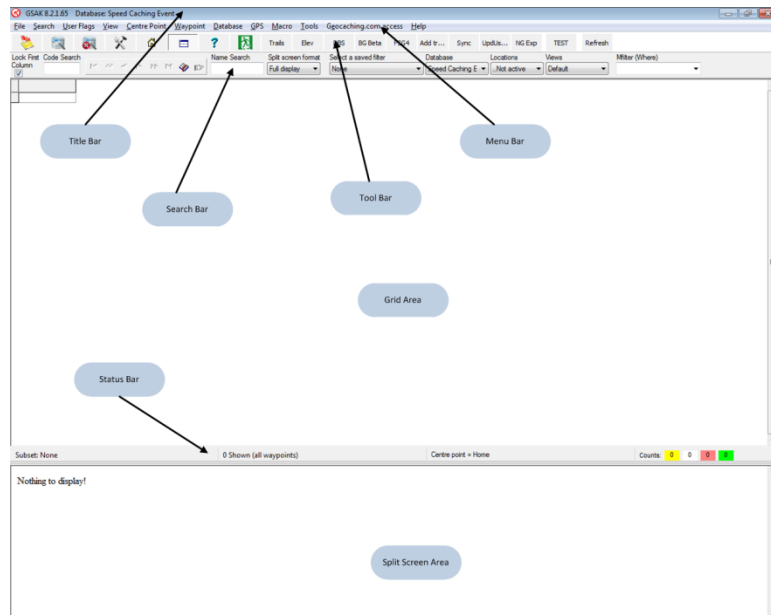


Figure 1 - Screen Elements

Some of the screenshots may look different from a vanilla installation due to tweaking that I have done but hopefully you should be able to make sense of everything 😊

3 Initial Configuration

It is very important that you configure GSAK properly as it uses information in the configuration in many ways and if this is wrong, you will get various issues.

To configure the options, go to the Menu bar and select Tools->Options. This will show the following screen:

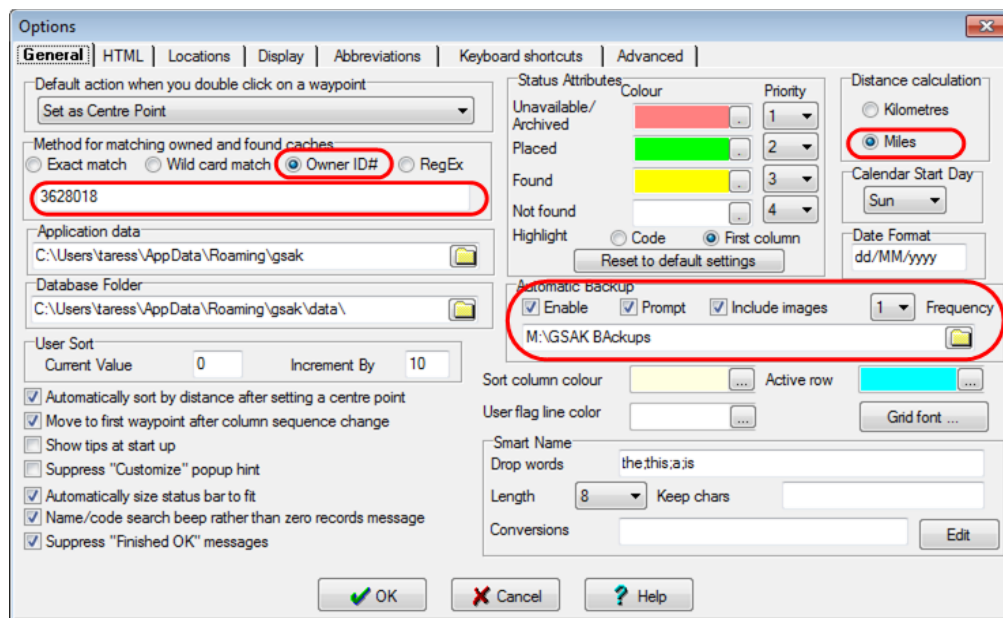


Figure 2 - General Options

The important options are highlighted.

- Owner ID#. I have the best results by using the account ID rather than the Exact Match. This is also handy if you change username at Geocaching.com as the user ID will always be the same. You can get your account number by going to <http://www.geocaching.com/account/>.
- Distance. Make sure this is set as Miles unless you are also going to be caching on the continent.
- Automatic Backup. GSAK can automatically backup up all your databases and settings when you exit the program. GSAK keeps a rolling copy of your most 5 recent backups. The backup files are named GSAKAuto1.zip, GSAKAuto2.zip, GSAKAuto5.zip

Now select the Locations tab and you will get a screen similar to the following (I have masked some details for privacy reason):

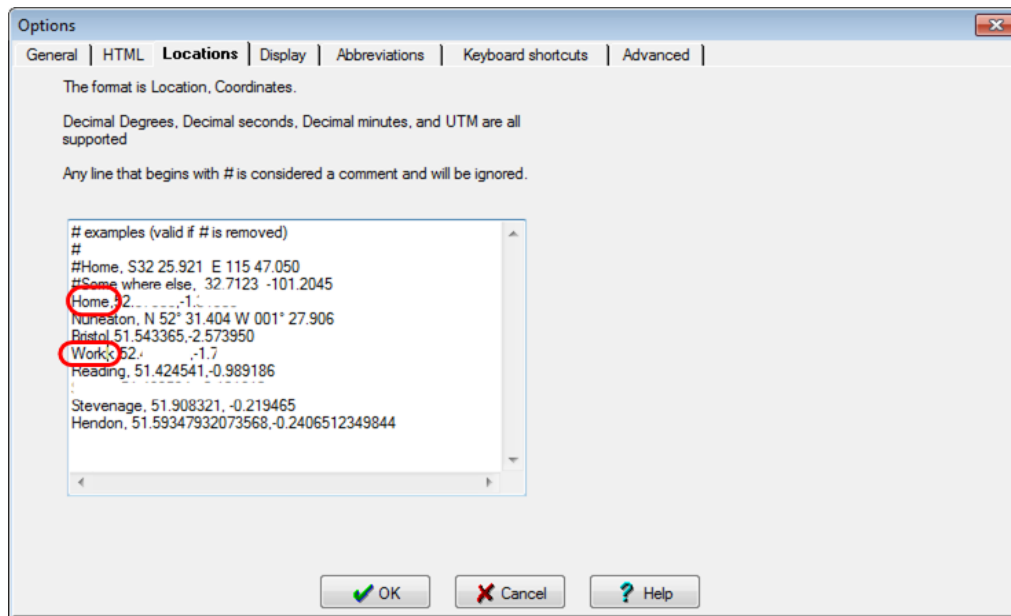


Figure 3 - Setting Locations

As can be seen, you can have many locations. Your primary ones should probably be Home and Work. These are used to help filter caches based on a particular location.

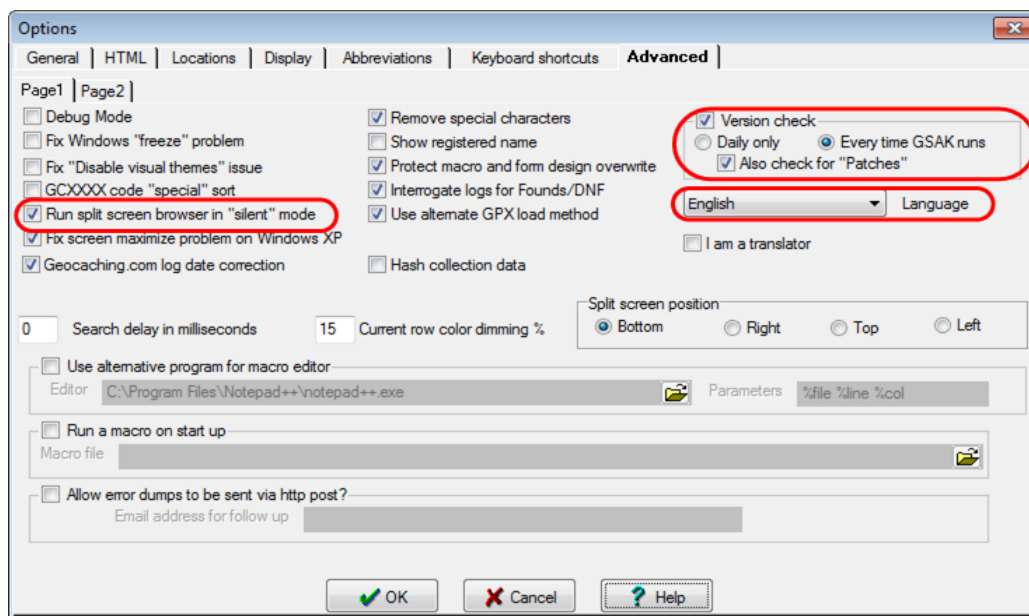


Figure 4 - Advanced Settings

- Run split screen. This option is used to suppress any split screen browser messages that may pop up. For example, if you view a page that has script errors you currently get a pop up message saying that the current page has script errors.
- Version Check. This is used to ensure you have the latest version running (if you choose to install it). GSAK's author is always updating the program and it is normally good to have the latest.
- Language. GSAK can run in multiple languages if you require.

4 Data

The main purpose of GSAK is to store and manipulate Geocaching data. To allow you to do anything, you need to have data in your database. This can be done by two methods.

4.1 Loading PQs

A Pocket Query (PQ) is the original way of generating data which is then imported into GSAK. Creation of PQs is out of scope of this document but a goof source of information can be found at <http://markwell.us/pg.htm>. You need to be a premium member at Geocaching.com to create a PQ.

Once a PQ has been generated and downloaded to your PC go to the Menu bar and select File->Load GPX/LOC/Zip file.

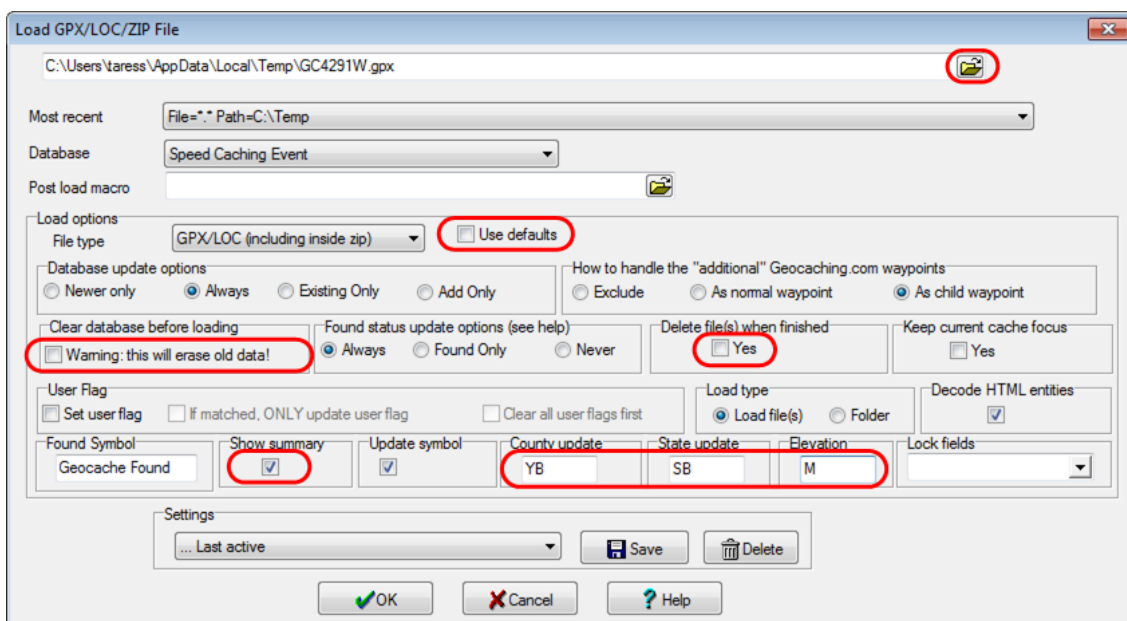


Figure 5 - PQ/GPX Load dialog

- The folder symbol at the top right hand side of the screenshot is used to allow you to find the file which you wish to import.
- By default, the **Use defaults** option is ticked but change this to unticked and you will have a lot more control over the way that GSAK interacts with the load.
- Make sure that the **Warning** is **NOT** ticked as this will delete everything that is already in your database and you will only end up with the information that is contained within the PQ.
- If you want GSAK to tidy up after itself, you can tick the **Delete file(s)** option.
- To begin with, make sure that **Show Summary** is ticked as it shows some information to you after the data is loaded.
- Some useful options to have set are:
 - County update: Automatically updates your database with county information for caches. Y = Update county and B = only update if blank
 - State Update: Automatically update your database with state information. S = Update State and B = Update if blank
 - Elevation: Automatically updates the elevation of caches. There is no need to run a separate macro.

During the loading process, you will see a dialog box similar to the following:

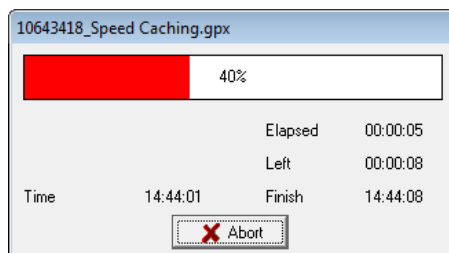


Figure 6 - PQ Loading

Once the data is loaded (and assuming you had the **Show Summary** option ticked), you will see something similar to the following:

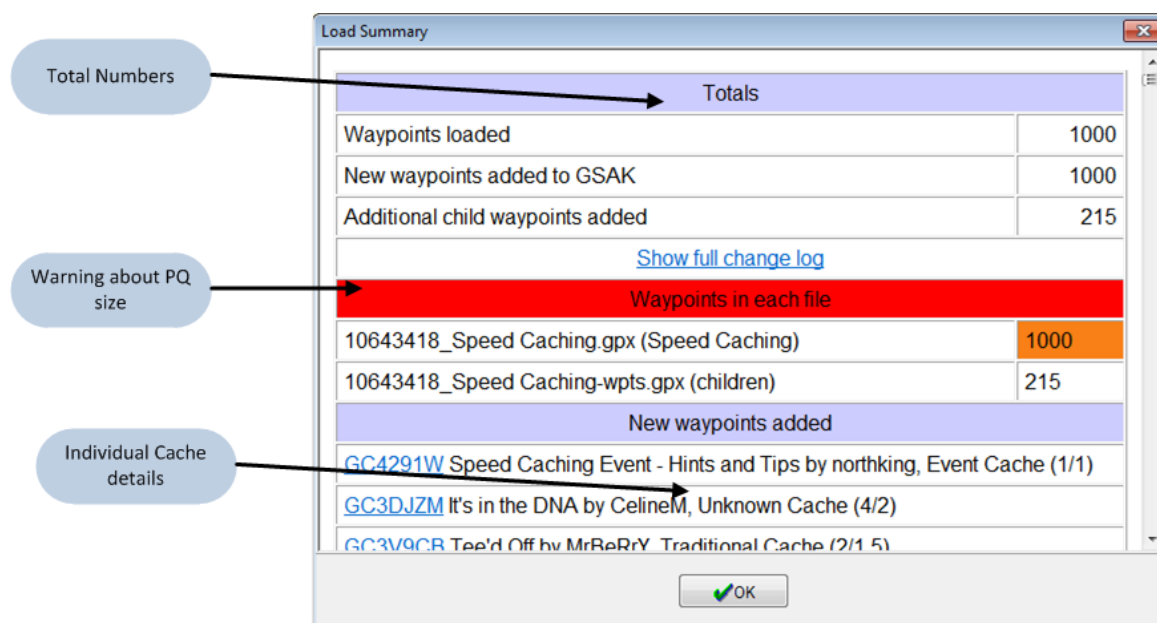


Figure 7 - Summary Box

The Total Numbers shows the overall total waypoints which have been loaded. If you had selected to load a folder in the load dialog rather than a single file, you are able to load multiple PQs at once.

This area is normally coloured in the same way as the Totals header but if you are at the PQ limit (1000), this will turn red. This is useful if you have created a set of PQs which are date related as you will be able to see when it is time to create a new PQ.

4.2 API

One of the benefits of Version 8 of GSAK is that it used the Geocaching.com API (Application Programming Interface). This is simply a way to connect directly to the Geocaching.com website and ask it for information which will then be returned to GSAK.

The benefit if using the API is that it allows you to get more information in addition to any PQs you have set to run on Geocaching.com as well. For premium members the limits are currently 6,000 full caches per day (and also 10,000 "lite"¹ caches). For non-premium members the limits are 3 full caches per day (and 10,000 "lite" caches) .

Before you use this functionality, you must connect your copy of GSAK to your Geocaching.com account. How this is done is shown in section 9.1. Further details of the API are discussed below.

Go to the menu bar and select Geocaching.com access and then Get Geocaches:

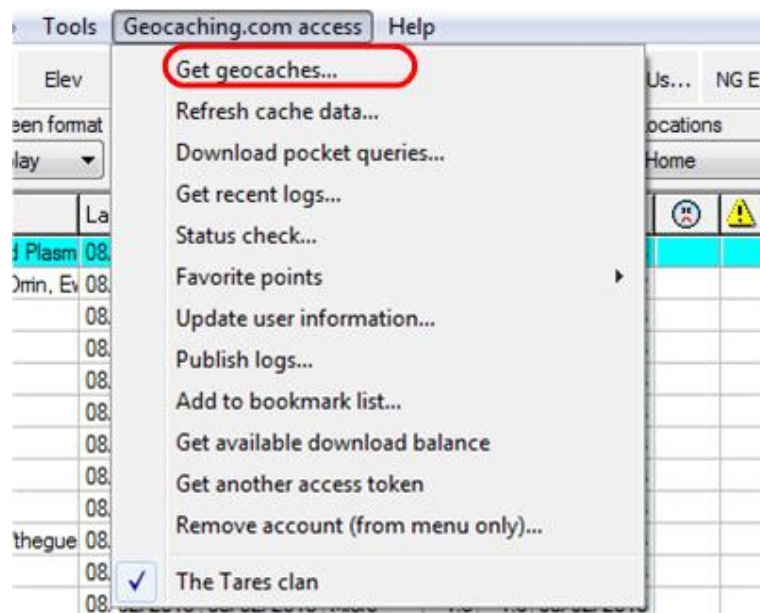


Figure 8 - Get Geocaches from Geocaching.com

¹ A full cache can be seen as being the same as having the same information as a .GPX file (ie contains logs etc) and a lite is similar to a .LOC file.

The following dialog is shown:

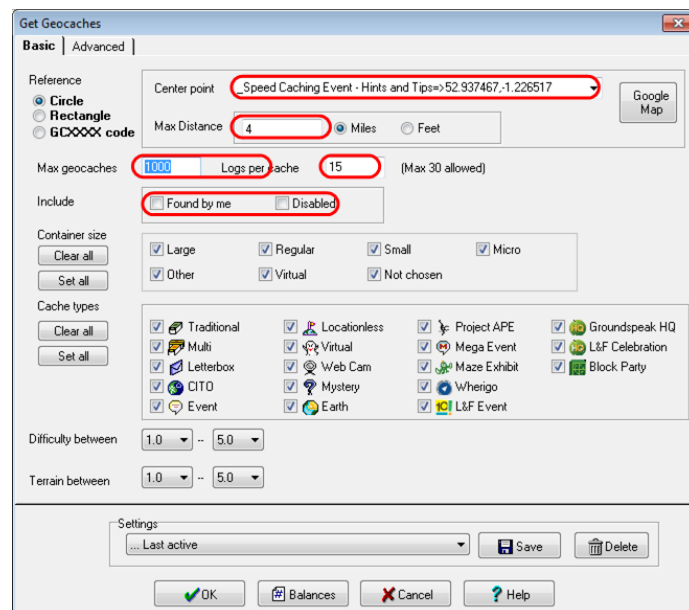


Figure 9 - Get Geocaches - Basic Tab

Remember that we set up locations Figure 3, these are where they can be useful. You can use your location for the center point or you can use an existing cache as shown here.

As can be seen, this dialog looks a lot like a PQ questionnaire on the Geocaching.com website but it also has some additional features, both on this screen and on the Advanced tab discussed below. The main option to care about on this screen is the number of logs to download. Although you can download up to a maximum of 30, you do not always want to do this as it will take longer. There is a facility to download up to 9999 logs which will be discussed in 9.3.5 but this should be used very sparingly.

The Google Map button allows you to draw a rectangle or a circle on a Google map, thereby potentially giving a better level of granularity.

The Advanced tab gives some very handy extras that you cannot do via a PQ.

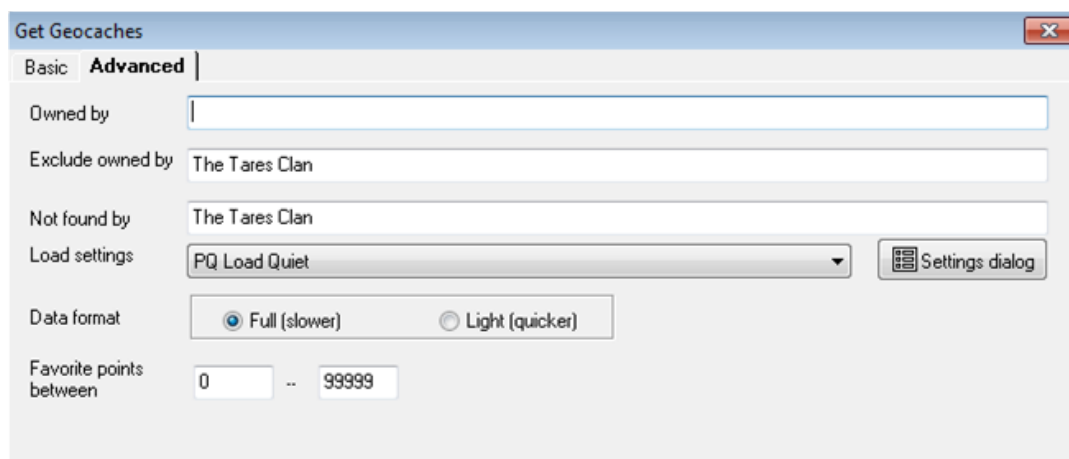


Figure 10 – Get Geocaches – Advanced Tab

- **Owned By:** only find caches owned by a particular cache owner.
- **Excluded By:** Do not download any caches owned by a particular cache owner.
- **Not Found By:** Only download caches which have not been found by a particular cacher
- **Data Format:** Full gives the equivalent of a PQ GPX file (with the addition that a PQ file only has the last 5 logs in it). Lite is equivalent to a .LOC file and is useful for just check the status of a cache.
- **Favorite points:** Only download caches which have a certain amount of favourite points.

The powerful thing about the **Owned**, **Excluded** and **Not Found** fields is that you can link up to a maximum of five names. For example, if I wanted to download caches that had not been found by myself and two other cachers, I would put "The Tares Clan,cacher1,cacher2" in the **Not Found** field.

5 Main Screen

Once some data has been loaded in GSAK, you should see a screen similar to this (there will be differences due to customisation I have done which will be discussed below.)

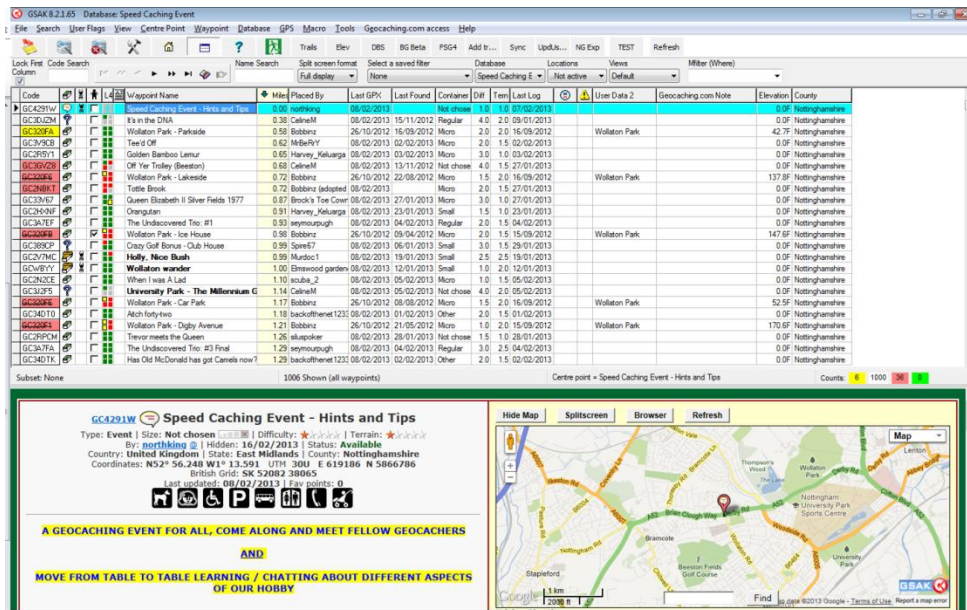


Figure 11 - Main Screen

IMPORTANT

The screenshot above may look different from what you will actually see depending on the version which is installed, whether there are specific toolbars shown and which particular columns are shown. Setting of columns will be discussed below.

5.1 Split Screen

As can be seen the Split Screen Area now shows details of the cache and also a map of the location of the cache. There are other split screen options which can be changed by using the following button:

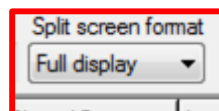


Figure 12 - Split Screen Format

A useful one that you can have is Dual Map (this is a separate download called HTML_DualMap from the GSAK Macro Index) which shows a Google Map and SteetView – below is an example of what is shown for this event.



Figure 13 – DualMaps

The split view can be switched on and off by pressing the F2 button.

5.2 Code Colouring

The Code field is coloured to help you easily identify types of caches. The colours are defined in the options – see Figure 2 - General Options. These colours also colouring used on the status bar – see Status Bar.

5.3 Child Waypoints

Child Waypoints are additional waypoints to the main coordinates. These can be published by the cache owner or can be defined by the user. The types of child waypoint that can be configured are:

- Final Location
- Parking Area
- Question To Answer
- Stages Of a Multicache
- Trailhead
- Reference point

You can easily identify a cache which has additional waypoints as they are shown in bold within GSAK.

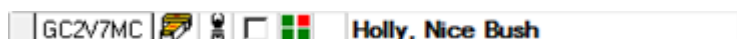


Figure 14 - A Child Waypoint

The information of the child waypoint is shown in the split screen.

Additional Waypoints (1)							
Code	Name	Type	Links	Comments	Date	Coordinate s	Distance
CP2V7MC	GC2V7MC Parking	Parking Area	Google Maps	This is the suggested starting point for the cache, it is a hard standing Car Park	29/04/2011	N 52° 56.959 W 1° 12.757	0.05 miles NW

Figure 15 - Child Waypoint detail

5.3.1 Grab Coordinates

There is a very useful macro called GrabLogCoordinates.gsk which simplifies the grabbing of coordinates from log text and from cache descriptions and automatically adding them as child waypoints. This is very useful for any corrected coordinates in logs or for adding child waypoints which are in the cache description.

For example, <http://coord.info/GC1ZCXG> Clodeeclogs#1 has the following in the text:

*Additional Waypoints
CA1ZCXG - Parking area
N 53° 03.257 W 001° 19.781
Flat area by the kissing gate*

The macro will add the following:

Additional Waypoints (1)							
Code	Name	Type	Links	Comments	Date	Coordinates	Distance
CA1ZCXG	Parking area	Parking Area	Google Maps	Flat area by the kissing gate	02/10/2009	N 53° 03.257 W 1° 19.781	1.63 miles N

Figure 16 - Child Waypoint example

5.4 Views

GSAK has been written so that you can configure it to look how you want – this allows you to view the information which you want to see. Multiple views can be created and selected as and when required.

A view is defined by the selection of columns you decide upon, the order, width and name of those columns. The first column can be locked in place to make it always stays in view.

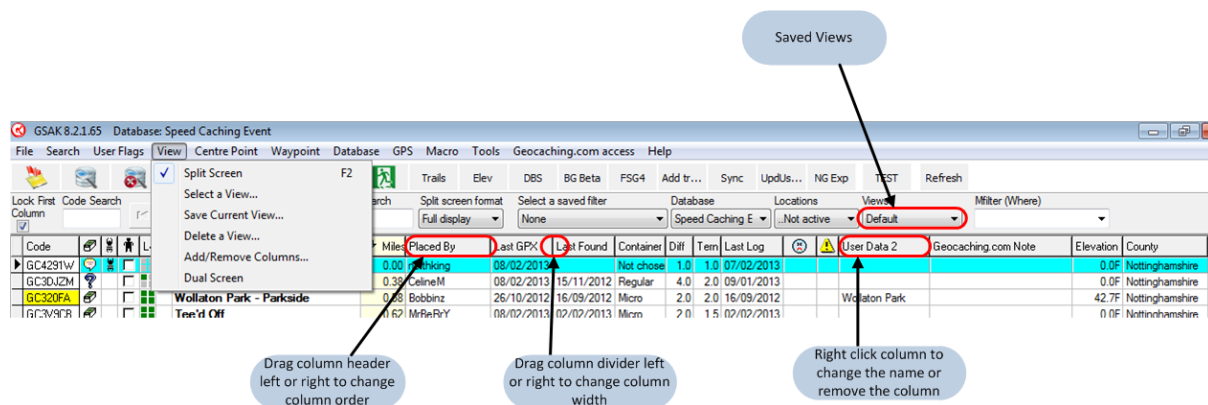


Figure 17 – Columns

Once you define a view, you can save it and then recall it at any time. You can even get a particular view to be the default for different databases.

5.4.1 Selecting Columns

To add to the default columns, you have to go to the Menu bar and select Tools->Options and then select the Display tab.

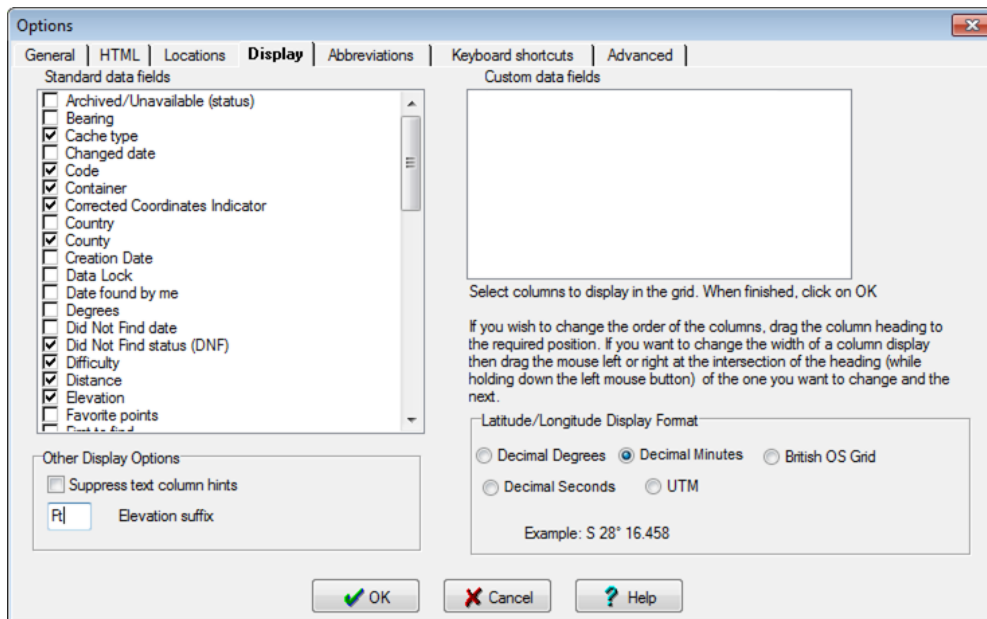


Figure 18 - Adding Columns

5.5 Status Bar

The Status bar now contains a lot of useful information.

Subset: None

This tells you whether there is an active filter. If you have a filter active, you will see something like:

Subset: Last 2 DNF (GSAK Default)

1006 Shown (all waypoints)

If no filter is active, it shows the total number of waypoints in the current database. If you have a filter active, you will see something like:

66 Shown (out of 1006) 6.6%

Centre point = Speed Caching Event - Hints and Tips

This shows the name of your current centre point. All distances and bearings are calculated from this point. To set any waypoint as the centre point, right-click the required waypoint and choose Set this cache as centre point. If you want to set this to your Home coordinates, click the



icon on the toolbar.



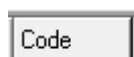
This shows the counts for the caches you have found, not found, or placed; and the number of archived caches in the current database. These counts reflect totals according to the current filter.

You can double-click on any of these counts to set a filter based on the corresponding total (ie double click on the yellow 6 and only those caches you have found will be shown)

5.6 Grid Area

The grid area is where you see the information regarding the caches within your filter (if active). The columns which are shown can all be customised and then recalled whenever required. This is achieved by going to your Menu bar and selecting View->Add/Remove Columns.

Useful columns to have are



This is the unique GC code given by Geocaching.com. However it will be coloured according to the status of the cache, using the same colours as used on the status bar.

There is a priority of colours which are used and can be changed via the options. This is sometime useful if you always want to see a particular colour for your finds for example.



This indicates the type of the cache (Traditional, Multi, Event, etc)



This column indicates the waypoint has a travel bug (according to geocaching.com)



This is the user flag. If you want to filter a set of caches quickly, you can click on this column for a cache and then press F8 to only show those caches.



This column indicates the status of the last four logs for that cache. The colours have the following meaning:

Green = Found or owner maintenance

Red = Not Found

Grey = No log yet

Yellow = Needs archiving or Needs maintenance



This means that there is a user note attached to the cache. To create a user note, double click on this column and a dialog will open up. This allows you to store information on the cache – especially useful for holding information on solving

puzzles or for bonus caches.

The log section of the Notes is not really used now and is better dealt with by means of Publish Logs which is discussed in 9.3.



This indicates that a cache has a set of corrected coordinates. Once you have solved a puzzle, you can set a corrected coordinate and this will be used as the cache location when you export the information from GSAK. See 7.2.2 for more information about this.

5.7 Sorting

If you wish to sort the information in front of you, click on any column heading, the grid will be sorted on that column. Click again to have the sort sequence reversed. Multi column sorting (2 only) is also supported. GSAK will use your last selected sort as your "secondary" sort sequence. For example, if you want to sort caches by container type then distance and then first click on the distance heading and then click on the container heading.

Code				L4	Waypoint Name	Mile	Placed By	Last GPX
GC4291W					Speed Caching Event - Hints and Tips	0.00	northking	08/02/2013
GC3DJZM					It's in the DNA	0.38	CelineM	08/02/2013
GC320FA					Wollaton Park - Parkside	0.58	Bobbinz	26/10/2012
GC3V9CB					Tee'd Off	0.62	MrBeRrY	08/02/2013
GC2R5Y1					Golden Bamboo Lemur	0.65	Harvey_Keluarga	08/02/2013
GC3GVZ8					Off Yer Trolley (Beeston)	0.68	CelineM	08/02/2013
GC2NBKT					Tottle Brook	0.72	Bobbinz (adopted)	08/02/2013
GC320F6					Wollaton Park - Lakeside	0.72	Bobbinz	26/10/2012
GC33V67					Queen Elizabeth II Silver Fields 1977	0.87	Brock's Toe Cowr	08/02/2013
GC2HXNF					Orangutan	0.91	Harvey_Keluarga	08/02/2013
GC3A7EF					The Undiscovered Trio: #1	0.93	seymourpugh	08/02/2013
GC320FB					Wollaton Park - Ice House	0.98	Bobbinz	26/10/2012
GC2V7MC					Holly, Nice Bush	0.99	Murdoc1	08/02/2013
GC389CP					Crazy Golf Bonus - Club House	0.99	Spire67	08/02/2013
GCWBYY					Wollaton wander	1.00	Elmswood garden	08/02/2013
GC2N2CE					When I was A Lad	1.10	scuba_2	08/02/2013

Figure 19 – Sorting

6 Filtering

IMPORTANT Filtering can only work with the information that is held within your database. If you do not have the logs in your database, you will get “wrong” caches filtered. See section 9 for how to ensure that logs are up to date.

Filtering is one of the most powerful parts of GSAK. It allows you to take a large database and find the information you want without harming the overall database. For example, if you wished to find all caches by northking which are available and within five miles of this event, you cannot create a PQ to do this but it is very simple in GSAK.



Figure 20 - Filters

You can set up a new filter in one of two ways. The first is to click on Menu->Search->Filter as shown on the left in Figure 20 - Filters and the other is to click on the magnifying glass on the tool bar, as shown on the right. If you decide to cancel a filter, you press the red X as shown above.

As with views, you can save filters for later use.

6.1 General Tab

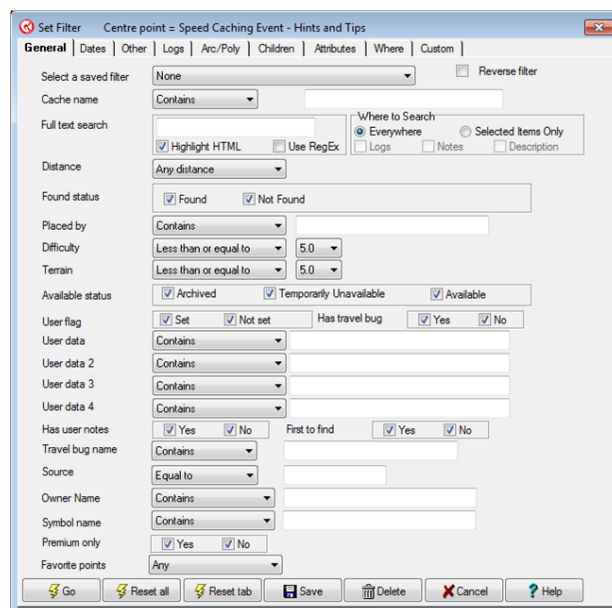


Figure 21 - Filter - General Tab

Field	Description
Select a Saved Filter	Allows you to open a previously saved filter configuration. Click on the drop down arrow on the right of that field to view the list of previously saved filters.
Cache Name	Allows you to search for a cache by name or partial name.
Reverse Filter	Allows you to take a pre-existing filter and reverse it. For example, if you have a filter which only shows caches which have been found, using this will show only caches which you have not found.
Full Text Search	Allows you to search for a string of text in a saved cache page or the areas which you select. The Highlight HTML tick box will highlight the search term in the Split Screen.
Distance	Allows you to filter by distance from your chosen center point up to the maximum circumference of the database.
Found Status	Should be self-explanatory ☺
Placed By	This is whatever the cache owner puts in the placed by field and it is not necessarily the same as Owner Name.
Difficulty and Terrain	Should be self-explanatory ☺
Available Status	Should be self-explanatory ☺
User Flag	Allows you to filter by the user selectable flag. A User Flag allows you to mark any waypoint with a user flag (just click in the box). You can then set filters on this flag (F8). This allows you to select or exclude individual waypoints in your filters. This comes in very handy when you are creating a filter for export. To clear an individual user flag, just click on the box again.
User Data	These are fields where you can store information or keywords to filter out later. For example if a cache is in Wollaton Park, you can add this into a user data field and then filter on them.
Has User Notes	GSAK allows you to add your own notes for individual waypoints in the database. This is discussed in section 7.2.1
Travel Bug Name	Should be self-explanatory ☺
Source	This column indicates where your data came from – GSAK can understand data which has come from Geocaching.com, Terracaching.com and Opencaching.com for example.
Premium Only	Allows you to filter Premium only caches

Favorite Points	Allows you to set a filter on the required number of favorite points allocated to cache
-----------------	---

6.2 Dates Tab

This tab gives you a lot of control over searching with dates which is often useful when undertaking challenge caches which have date specific requirements.

The screenshot shows the 'Set Filter' dialog box with the 'Dates' tab selected. The title bar reads 'Set Filter Centre point = Speed Caching Event - Hints'. The tabs are General, Dates, Other, Logs, Arc/Poly, Children, and A. The following filters are listed, each with a dropdown menu set to 'Not applicable':

- Last found date
- Placed date
- Date found by me
- DNF date
- Date created
- Last update GPX
- Last update user
- Last log date
- Last change date

Figure 22 - Dates Filtering

6.3 Other Tab

The screenshot shows the 'Set Filter' dialog box with the 'Other' tab selected. The title bar reads 'Set Filter Centre point = Speed Caching Event - Hints and Tips'. The tabs are General, Dates, Other, Logs, Arc/Poly, Children, Attributes, Where, and Custom. The 'Cache types' section has a grid of checkboxes for various cache types, all of which are checked. The 'Bearing' section has checkboxes for N, NW, NE, E, S, SW, SE, and W, with 'Clear All' and 'Set All' buttons. The 'Degrees' section has a dropdown set to 'In range'. The 'Geocaching Owner ID #' section has a text input field. The 'Country' section has a dropdown set to 'Contains'. The 'State' section has a dropdown set to 'Contains'. The 'County' section has a dropdown set to 'Contains'. The 'Locked' section has checkboxes for 'Yes' and 'No'. The 'DNF (Did not find)' section has checkboxes for 'Yes' and 'No'. The 'Code' section has a dropdown set to 'Contains'. The 'My Found Count' section has a dropdown set to 'Not applicable'. The 'Elevation' section has a dropdown set to 'Any'. The 'Has child waypoints' section has checkboxes for 'Yes' and 'No'. The 'Container size' section has checkboxes for Micro, Small, Regular, Large, Other, Virtual, Not chosen, and Unknown, with 'Clear All' and 'Set All' buttons. The 'Corrected Coordinates' section has checkboxes for 'Yes' and 'No'. The 'Watching this Cache' section has checkboxes for 'Yes' and 'No'. The bottom of the dialog has buttons for Go, Reset all, Reset tab, Save, Delete, Cancel, and Help.

Figure 23 Filtering Others Tab

The most useful options on this tab are the cache types; the container size, the Country, State and County and corrected coordinates. Corrected coordinates can be either puzzles you have solved, or taken from caches where the posted coordinates are listed as off and other cachers have logged updated coordinates for the cache.

Also useful is the “My Find Count” as it quickly allow you to find caches where you have accidentally logged two finds (although there are caches such as Ye Olde Survey Monument (<http://coord.info/GC45CC> which may multiple found logs).

6.4 Examples

Let’s say, I needed to find all caches owned by northking which were puzzle and which had either a regular cache container or was marked as “other”. I would open up the Filter dialog and set the following on the General tab:



Figure 24 - Filter on Owner Name

And the following on the Other tab

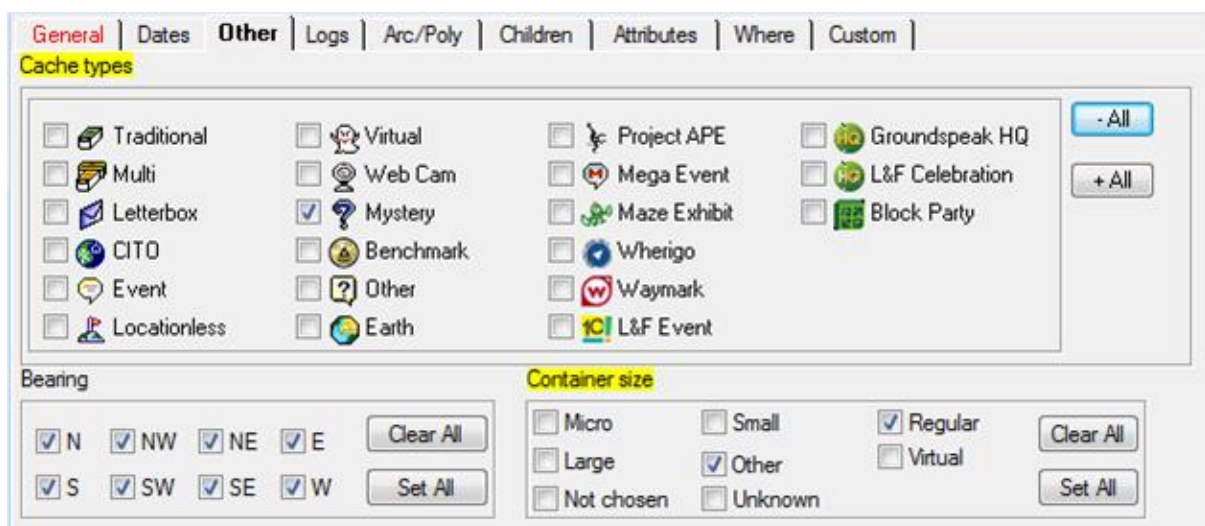


Figure 25 - Filter on Cache and Container

Note GSAK highlights what has been changed and also highlights which tabs have been changed.

This would result in the following:

Code					Waypoint Name	Miles	Placed By	Last GPX	Last Found	Container	Diff
GC422TV					Cars	5.26	northking	08/02/2013	03/02/2013	Other	2.5
GC27VXH					Caching Practice - Extras!!	7.36	northking	08/02/2013	02/02/2013	Regular	2.5

Figure 26 - Filtered Results

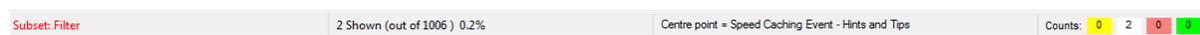


Figure 27 - Status Bar

Note that the status bar shows all of the information but restricted to the filter information.

Now let's say that I want to go for a caching expedition with a couple of other cachers but we only want to try to find caches that each other has not already found. Simply go to General tab and set:

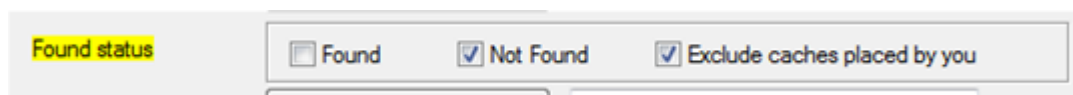


Figure 28 - Found Status

And then go to the Logs tab and set:

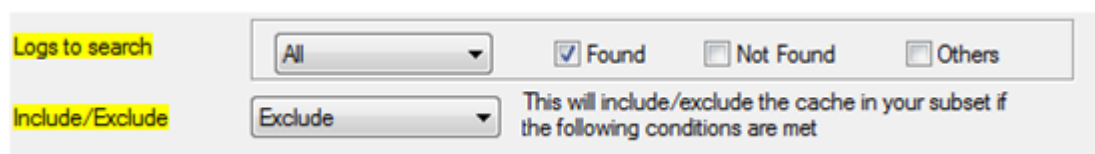


Figure 29 - Logs to search

And

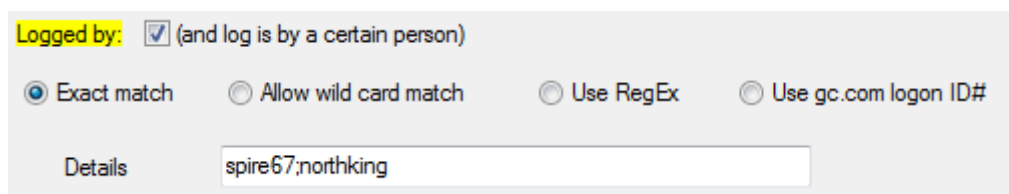


Figure 30 - Logged by

You can have up to 5 people in the details section – simply separate them by a ; (semi colon).

Note	It is only Found logs which are excluded – spire67 and northking may have posted a DNF or a Note on the cache page but that does not mean they have found it!
------	---

6.5 Caching along a route

Although there is a cache along a route PQ option on Geocaching.com, this is a far more flexible option as it allows you to specify a straight line or a multi-segment curved line or a polygon shape, and a distance from the line. If you go to Search-Set Filter and then choose the Arc/Poly tab and then click on

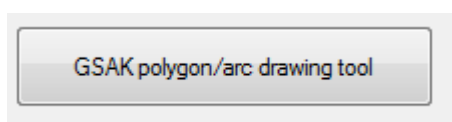


Figure 31 - Arc/Poly drawing

You will be shown a map which is based around the center point of your current database. If you click on the “Draw a line tool” you can click on the map to place a point and double click (or finish the polygon) to create the route.

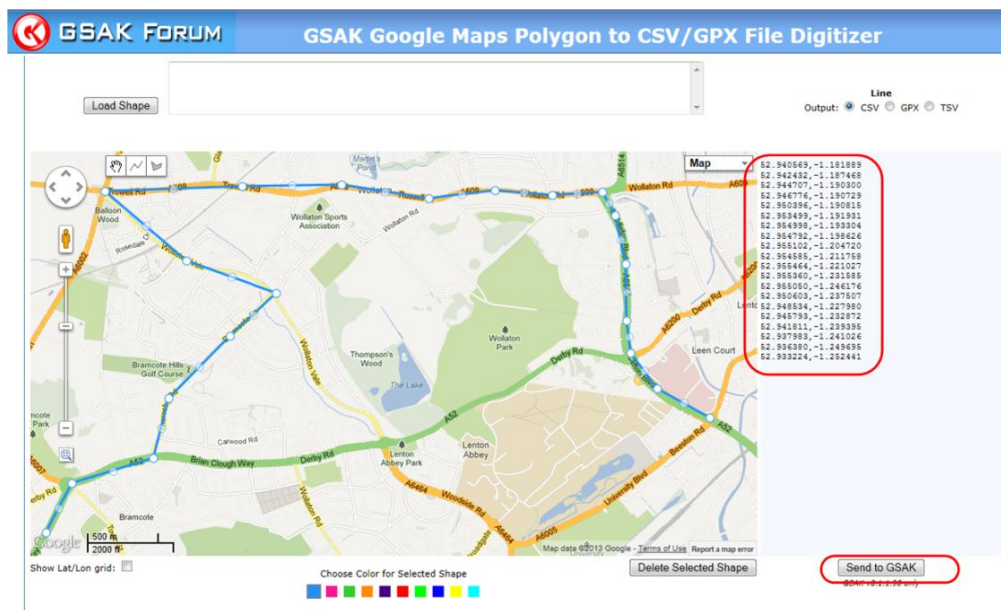


Figure 32 - Arc/Polygon Route Planning

Notice that GSAK create a list of coordinates which match the route. Once you are completed, you press the “Send to GSAK” button on the coordinates will be automatically added to the filter window.

When this is done, you can also select the distance in Miles (depending on your settings) either side of the line you also wish to include in the filter.

7 Databases

GSAK stores your cache information in a database. When first starting GSAK it creates a default database, which it calls "Default". You could use this for all your caches as it would be possible to hold tens, if not hundreds, of thousands of waypoints in it.

However, it may be easier to manage and keep up to date multiple databases. You can create additional databases if you wish, and you can call them names that mean something to you. For example, you might create a database for the waypoints near your home and another for near your work. They could be called Home and Work.

I would also recommend a database which is simply used to hold your finds as there is a number of very useful macros which expect to have a separate "Finds" database.

7.1 Create a database

To create a database go to the Menu Bar and select Database-New. You will see the following:

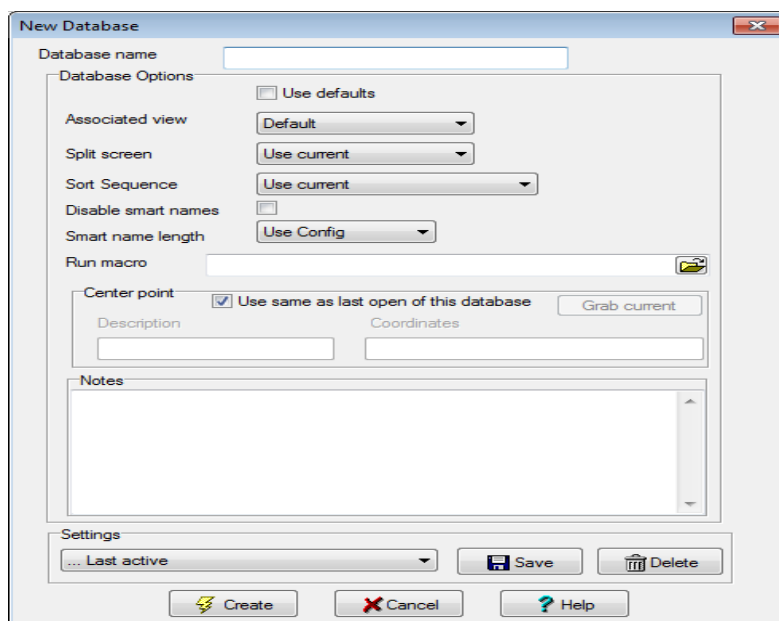


Figure 33 - Create a database

You give a name that is meaningful to you. You can also set default views, sort sequence and centre point for this specific database. This is where the power of views can come into itself.

You can now change databases either by selecting the Menu bar Database->Select or Via the Database dropdown on the Tool bar.

7.2 Adding data to the database

You can add data to the new database either by a PQ, a locally stored GPX/ZIP file or via the API as shown in sections 4.1 and 4.2.

7.2.1 User Notes

User notes are extremely handy for storing information about a particular cache and come into their own when working with puzzle caches. If you select a cache and right click on it, you will see the following:

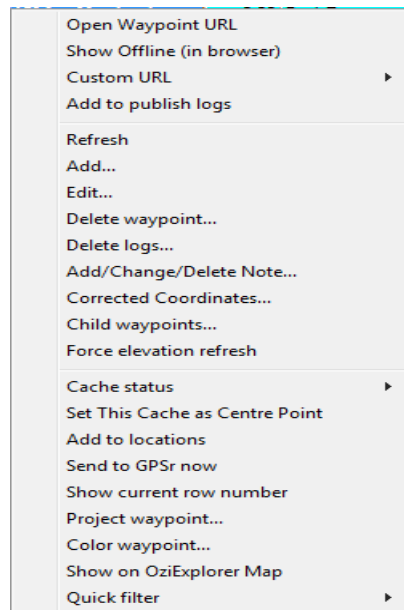


Figure 34 - Cache Right Click Options

If you select “Add/Change/Delete Note...” you will be shown the following:

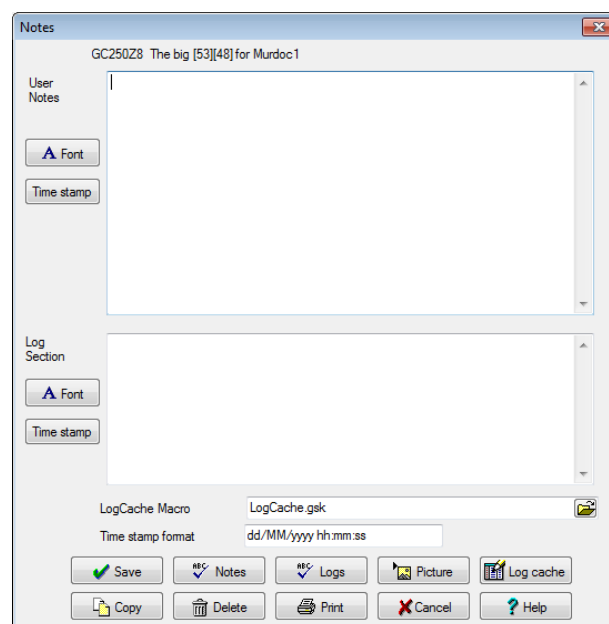


Figure 35 – Notes

In the user notes section, you can put anything you want and it will be saved in the database. I personally use it to save information when working out a puzzle.

NOTE: With the release of V8 of GSAK and the Groundspeak API, the "log section" of the user notes is now deprecated. I would recommend you use the new "Publish logs" feature, and enter all your log text there. Further information can be found at 9.3

7.2.2 Corrected Coordinates

Once you have solved a puzzle, it would be a good idea to have the location of the final cache within the database. It is best to use corrected coordinates here as Groundspeak inconsistently provides corrected coordinates or original coordinates, depending on how you obtain the data (e.g. Pocket Query vs. Geocaching.com access (API)).

This means that if you load corrected coordinates posted online at geocaching.com, GSAK simply updates the coordinates for the cache (i.e. GSAK cannot distinguish between changed coordinates and corrected coordinates). In other words, there are no corrected coordinates in GSAK using this approach (which is why GSAK would not show the corrected coordinates indicator).

NOTE If you use Corrected Coordinates in GSAK, they will not be overwritten by any changes made on the Geocaching.com.

To use corrected coordinates, right click on the cache you wish to change and you will be shown the following:

Figure 36 - Corrected Coordinates

NOTE The coordinates shown above are made up and are **NOT** the correct coordinates for the cache – please do not go there!

Once you have put in corrected coordinates, GSAK will update the map in the split screen as shown below. The cone signifies the original position of the cache, the question mark in the balloon shows where the corrected coordinates are (The blue P shows a parking waypoint).

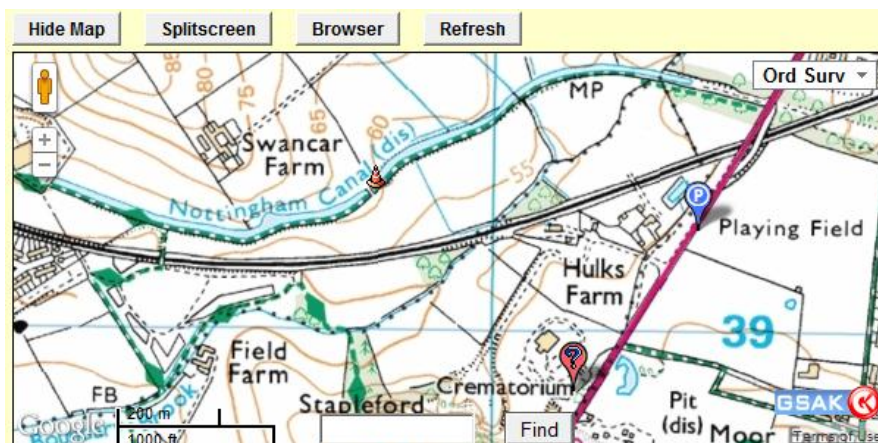


Figure 37 - Map showing corrected coordinates

7.3 Exporting Data

Once you have the data in GSAK, it would be helpful if you could export this to your GPSr or smartphone and GSAK has the ability to export data files to several other applications formats.

To export in one of these formats click on Menu->File and select “Export” as shown below.

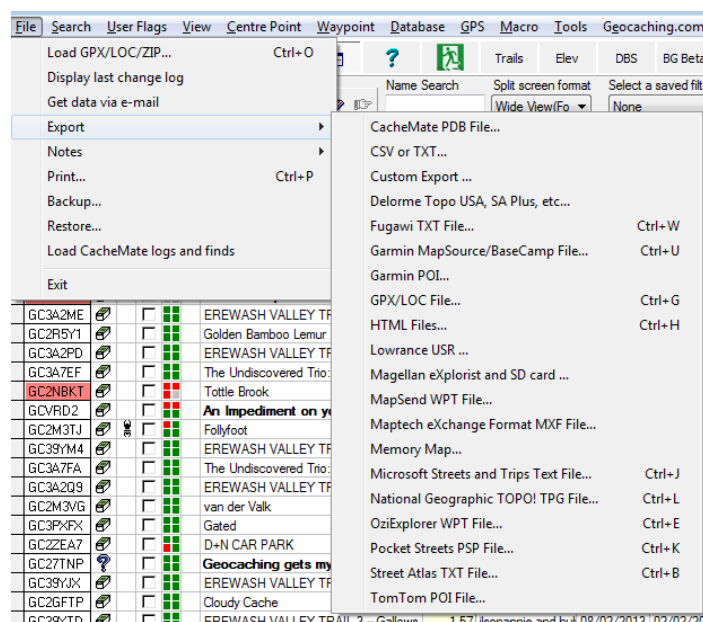


Figure 38 – Export Data

NOTE GSAK will export whatever information is in the active filter – if you wish to export the entire database, ensure that there is no filter set.

7.4 Send Waypoints

In addition to exporting, GSAK has the ability to send information directly to many GPSr devices. To facilitate this, you must setup the configuration of the GPSr. This is done via the Menu->GPS option:

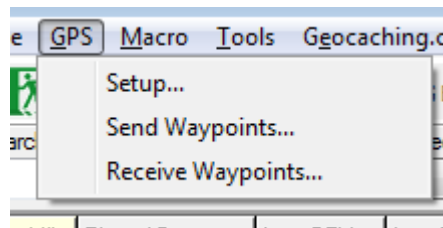


Figure 39 – Configure GPS

You are then shown the following:

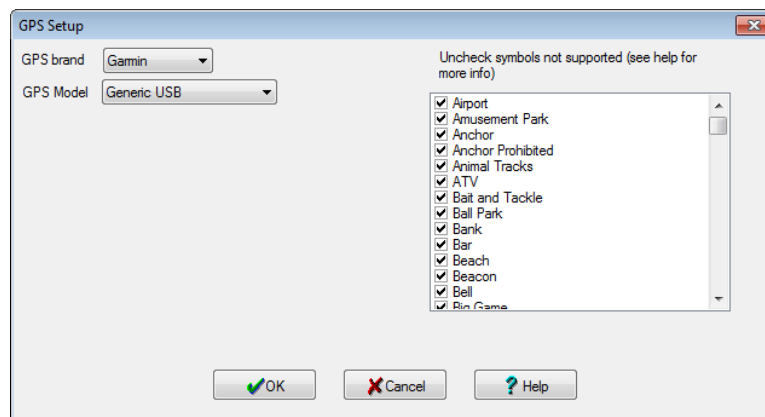


Figure 40 - GPS Setup

There are many options dependent on the GPSr you have. There are also macros which are GPSr specific which add additional features.

Once you have set up GSAK to know which GPSr you have, you can do Menu->GPS->Send Waypoints and you will be shown the following.

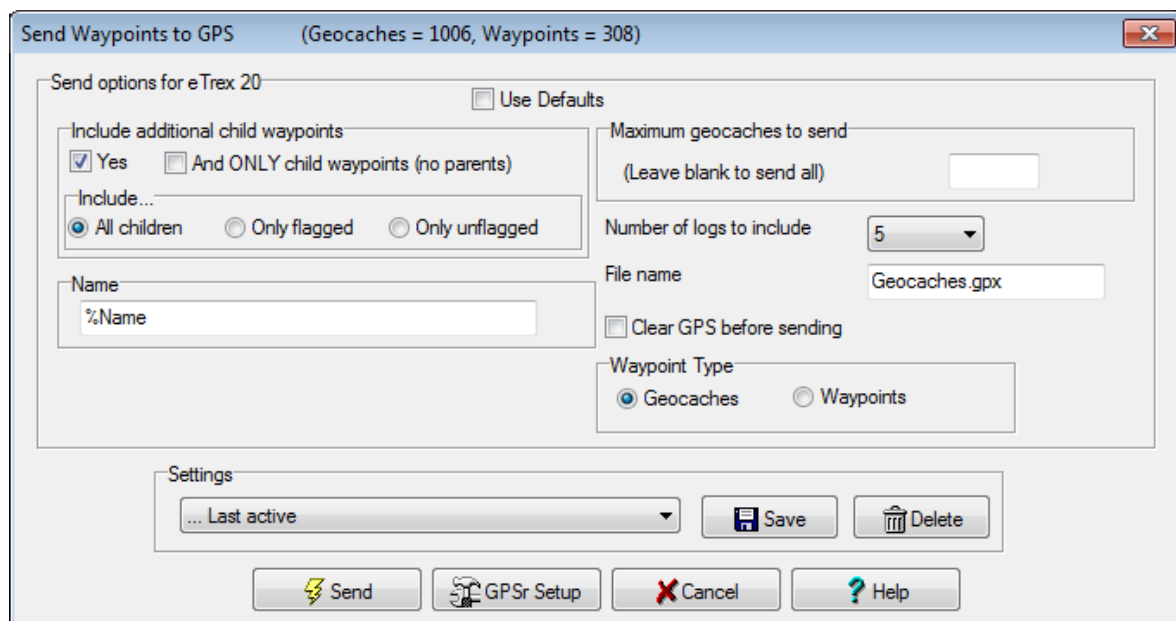
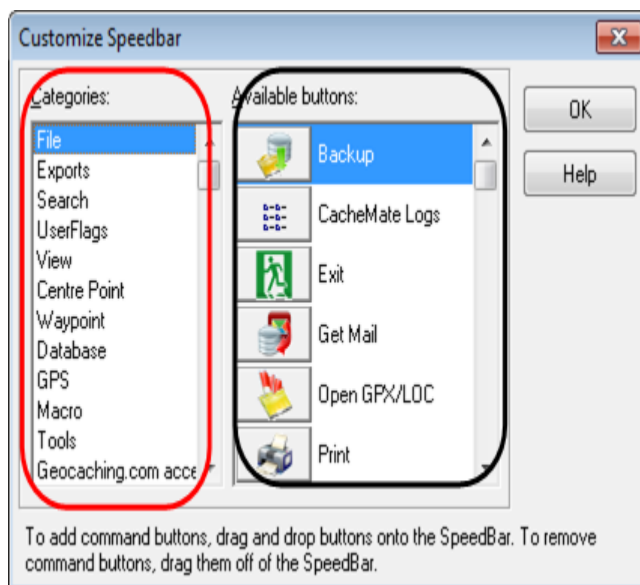


Figure 41 - Send Waypoints to GPSr

By default the “Use defaults” option is ticked. However, if you change this, you will have more control over what is actually sent to the GPSr. As with mostly everything in GSAK, “Send Waypoints” will send what is contained in the current filter.

8 Configuring the Toolbar

GSAK contains a user configurable area called the Tool Bar or Speed Bar. Tool buttons (such as the filter and file open) buttons perform the same functions as if you clicked on a menu item and chose a function under that drop down menu. The buttons are a sort of quick launch function. To change the tool buttons Right click in any open space not currently occupied by a button and select "Customize Tool Buttons" from the menu.



The section highlighted in red in the figure to the left shows the various categories of speed bar buttons.

The section highlighted in black show you the available speed bar buttons for the highlighted Category.

You may add, remove, and change position of any of the buttons. Buttons are available for almost all menu options, plus there are buttons for custom URLs and Macros.

Figure 42 - Customise Toolbar

To add a speed button, simply click on it and drag it up to the speed bar area and drop it. To remove an unused speed button click on it and drag it back to the dialog box. In addition while the Customize Speedbar dialog box is open, you can move and arrange any buttons on the speedbar. When you are finished editing the speed bar, click "OK" in the Customize Speedbar dialog box.

9 Geocaching.com API and GSAK

One of the major changes with version 8 of GSAK is that it is integrated with the Geocaching.com API (Application Programming Interface). This is simply a way to connect directly to the Geocaching.com website and ask it for information which will then be returned to GSAK.

The benefit if using the API is that it allows you to get more information in addition to any PQs you have set to run on Geocaching.com as well. For premium members the limits are currently 6,000 full caches per day (and also 10,000 "lite"² caches). For non premium members the limits are 3 full caches per day (and 10,000 "lite" caches) .

9.1 Authorising GSAK to use Geocaching.com

To start to use the API, you must authorise your copy of GSAK with your Geocaching.com account. This is simple and only needs to be done once if you only have a single account. If you have more than one account, GSAK supports up to a maximum of five Geocaching.com accounts for use with the API.

When you authorise your first username, you will see the user name you logged in as at the very bottom of your Menu->Geocachingc.com access menu with a check mark on the left hand side (to indicate this user is "active").

When you authorise your second (or subsequent) username, you will see another user added to this menu.

Now you can swap users by simply selecting the user from this menu - you won't be asked to log into Geocaching.com again.

At any time you can take the main menu option "Geocaching.com access" to view the currently selected user (the one with a check mark alongside it)

To authorise a user, simply select Menu->Geocaching.com access->Get Geocaches. You will then be shown a dialog which informs you that the process will contact Geocaching.com but that GSAK does not store this information.

You are then shown the following:

² A full cache can be seen as being the same as having the same information as a .GPX file (ie contains logs etc) and a lite is similar to a .LOC file.



Figure 43 - Geocaching.com Login

Once you have entered your information, you will see the following:

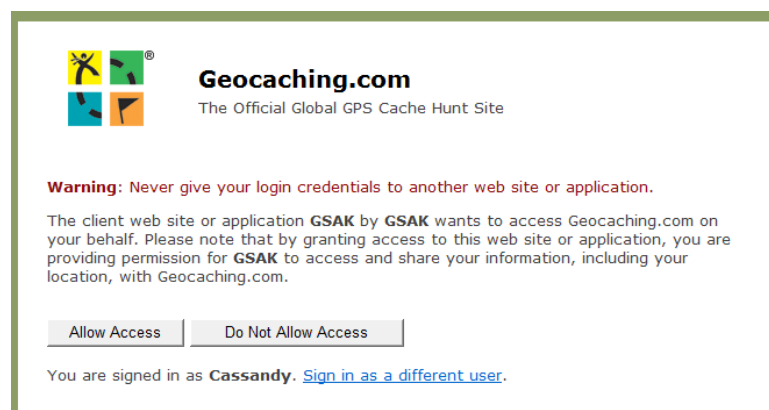


Figure 44 - Allow Access

Once you press "Allow Access" you are authorised. You will also get an email sent to the email address which Geocaching.com has for you as confirmation.

9.2 Get Geocaches

Once you are authorised, you are able to get information from Geocaching.com. Get Geocaches is discussed in section 4.2.

9.3 Publish Logs

A lot of GPSr and smartphones have the ability to create what is called a field note. This field note contains information about the date/time you found/did not find a cache and also the notes that you wrote at the time.

This file is normally called geocaching_vists.txt or fieldnotes.txt and if you can get this from your GPSr/smartphone and onto your PC, you will be able to use GSAK's ability to automatically publish logs and significantly reduce the time taken do log caches manually.

If you have go to Menu->Geocaching.com->Publish Logs, you will see the following (the menus are shown by either right clicking in the box or by pushing the Fetch button):

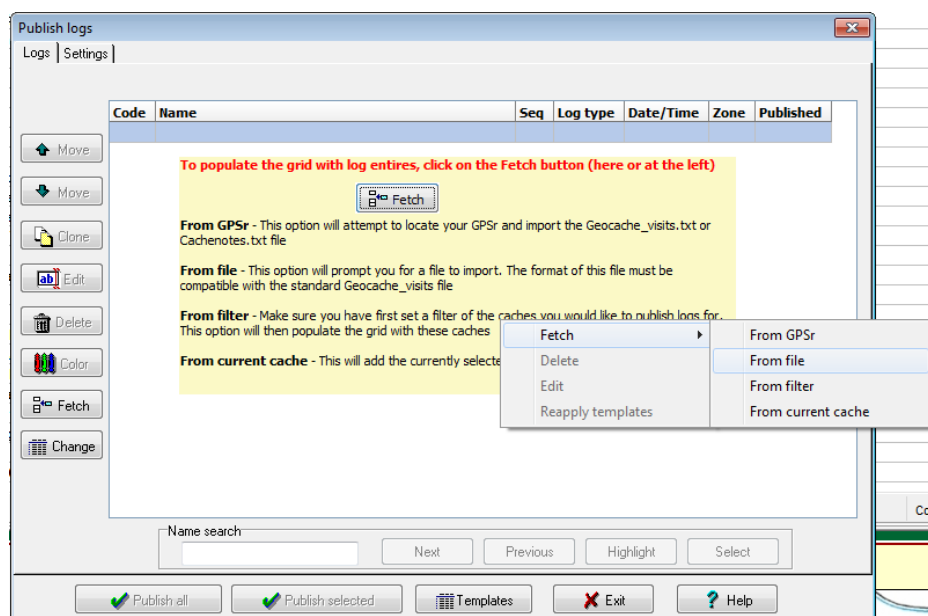


Figure 45 - Publish Logs - Fetch

Once you have loaded some file, you will see something similar to the following:

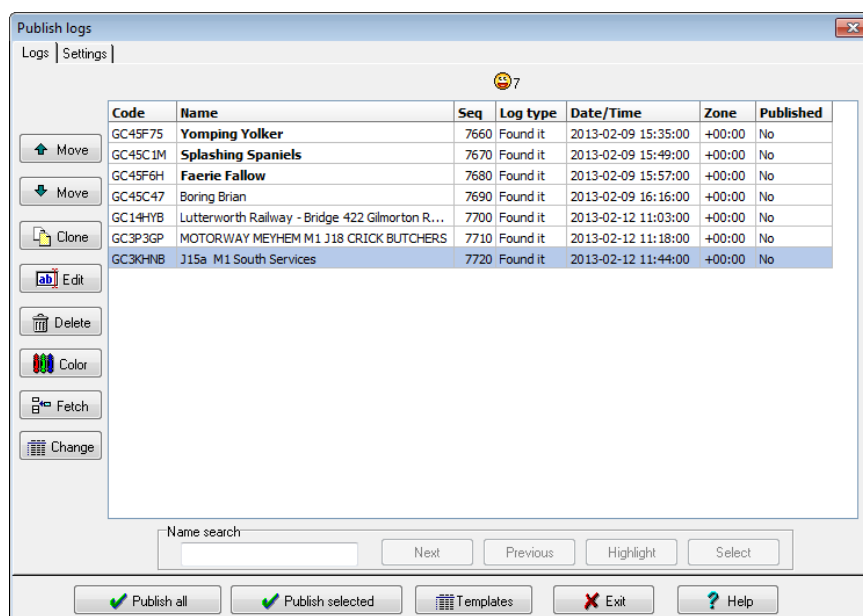
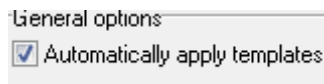


Figure 46 – Publish Logs – Populated Grid

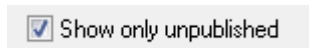
If an entry is not bold, it signifies that you have not written any descriptive text in the field notes section when you “logged” the field note at the time of finding the cache.

9.3.1 Publish Logs Settings

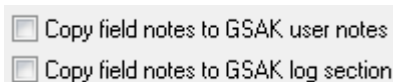
Before we actually publish some logs, it is important to understand some of the settings. If you click on the Settings tab, you will see something similar to:



Automatically Apply Templates - This option is the default and recommended. Templates are discussed below.



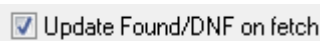
Normally you would only want to work with unpublished logs (the default). However, GSAK saves all your logging history so you can review old published log entries by unchecking this option.



Select this option to have any field notes automatically update the GSAK user notes or Log sections. This is the same as Waypoint->Add/Change/Delete Notes



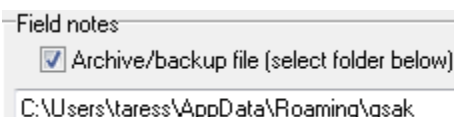
This option is would normally be used when you fetch from GPSr. Check this option to have the field notes file removed after the fetch has been done. It is safe to use this as long the Archive option is shown (see below)



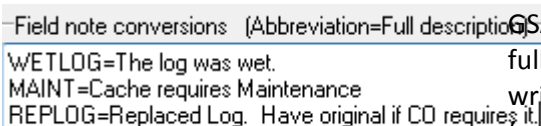
This automatically gathers your current found number at Geocaching.com and then updates templates with the information.



If you opt to keep your file after a fetch then you may want to use this option to ignore older logs in this file so they don't get loaded again.



Use of this option would normally be in conjunction with the "Delete file after fetch" option. GSAK will take a backup of this file and place it in your [application data] folder (you can find this folder using "File=>Folder finder"). The backup file is named YYYYMMDDHHMMSS_FileName where YYYY = Year, MM=Month, DD = day, HH = Hour, MM = Minute, SS=Seconds, and FileName is the original file name.



GSAK supports abbreviations that will be expanded to the full version in your field notes. This means that you can write REPLOG in a field note and GSAK will automatically (using this example) change the text to "Replaced Log. Have original if CO requires it."

9.3.2 Templates

The use of templates enables you to have standard boiler plate text for each log type. These templates can just be literal text, but are more useful if you include dynamic information - which we refer to as %tags.

The dropdown box in the middle allows you get to select what type of log your template applies to. As we have '**Found it**' selected whatever we type in the box below will be applied to every cache that we find.

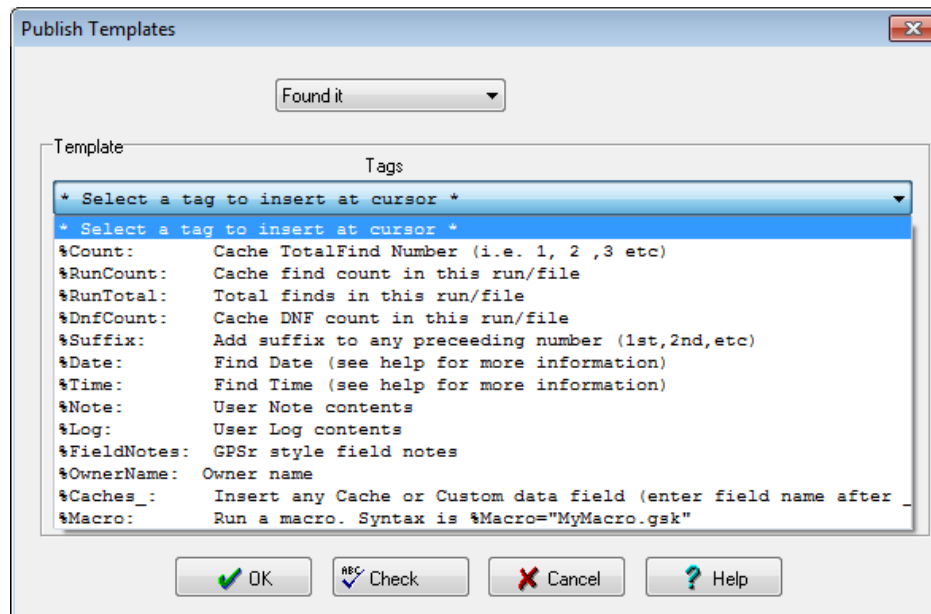


Figure 47 – Templates

An example of the type of information you can put in is:

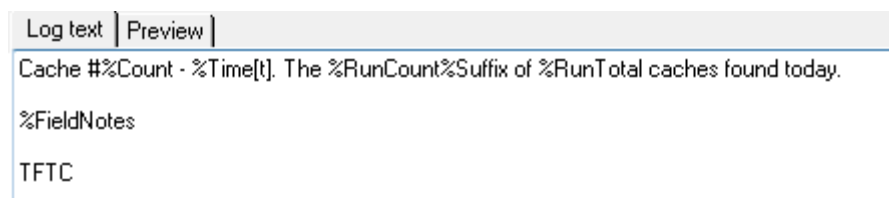


Figure 48 - Template Example

And when you click on the preview tab, you will see something like:

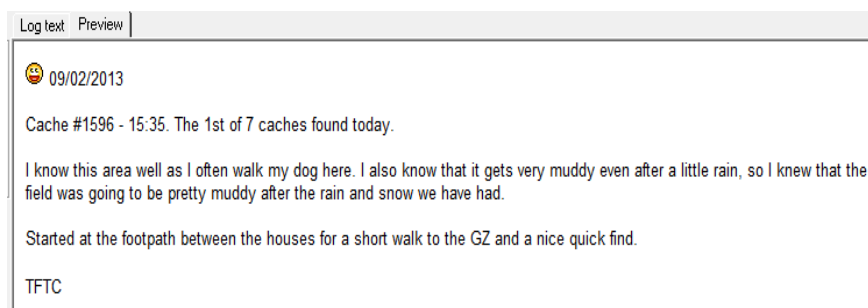


Figure 49 - Populated Template

9.3.3 Logging

Now that we have field notes and templates set up it is now time to actually log something 😊

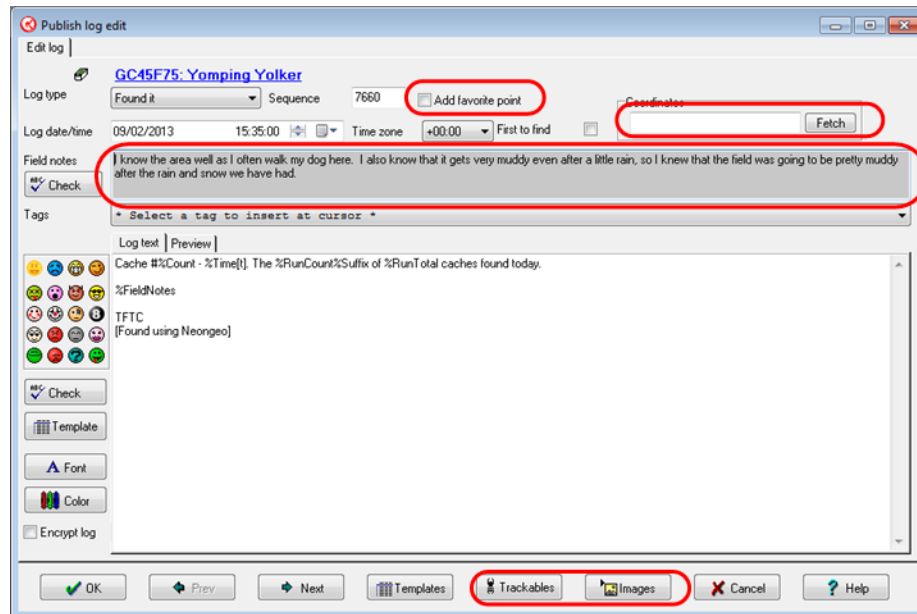


Figure 50 - Publish Logs Main Screen

The important areas on this screen are the ability to add a favourite point on a particular cache; add any coordinates you may have for the cache; the actual field notes area which you can change and the ability manage trackables and images when posting a log for a cache.

You can also mark a particular cache as a FTF.

Trackables

It is very easy to manage trackables within the Publish Logs dialog. Once you have pushed the button and then right clicked on a particular trackable, you are shown something similar to:

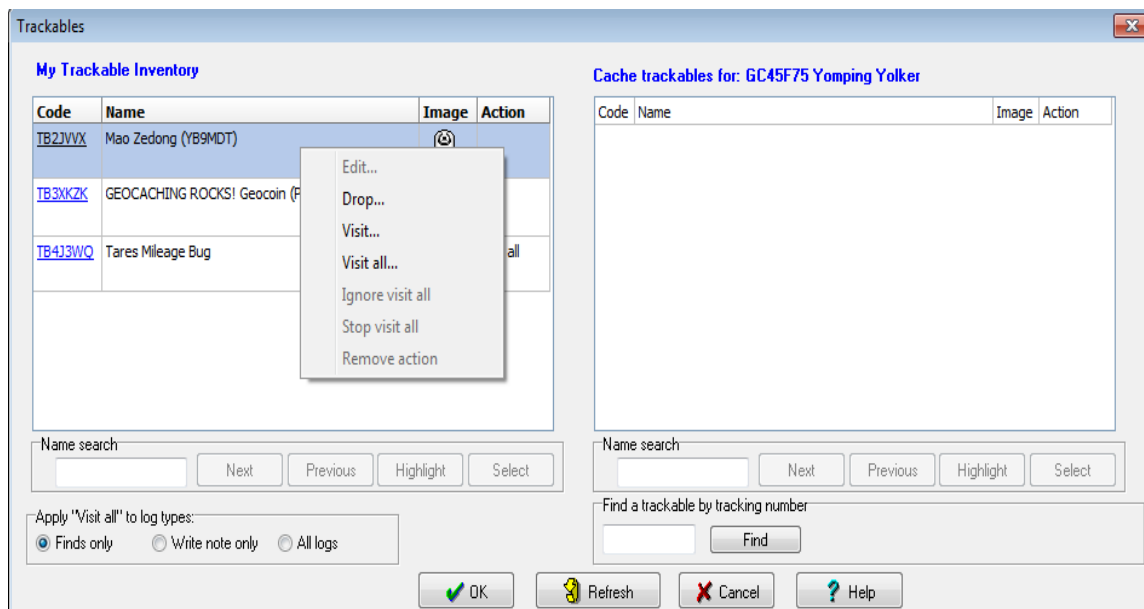


Figure 51 – Trackables

Once you have selected an option, you will be prompted to leave a note and then the screen will be updated to show the action being taken for each trackable.

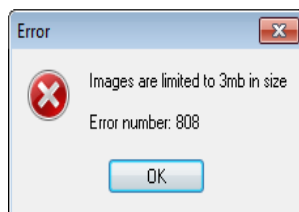
If there is a trackable in a particular cache, you will see it on the right hand side of the screen above. If you right click on a trackable here, you will be offered to Discover, Write Note or Retrieve the trackable. You will be prompted to enter the tracking code for the trackable.

Images

If you wish to add an image to a particular cache, press the Images button and then click Add. You will be prompted to find the photo which you wish to upload. You can add a caption for the photo and a description.

NOTE

Geocaching.com has a limit of about 3Mb for an image and GSAK will show the following error if you try to upload a picture bigger than this. You will have to resize the picture to be under 3Mb in size.



Publishing

Once you have completed all of your logs, you will actually want to send the information to Geocaching.com. There are two options which you can take:

- Publish All. This does what it says and publishes all of the caches in the Publish Logs dialog.

- **Publish Selected.** If you select a few caches to publish (say a particular day's caching), only these will be sent to Geocaching.com. GSAK is intelligent enough to understand about cache runs (Cache #%%Count - %Time[t]. The %RunCount%Suffix of %RunTotal caches found today in the template) and will make sure the numbers are correct.

When you press either of these button, you will see something similar to the following:

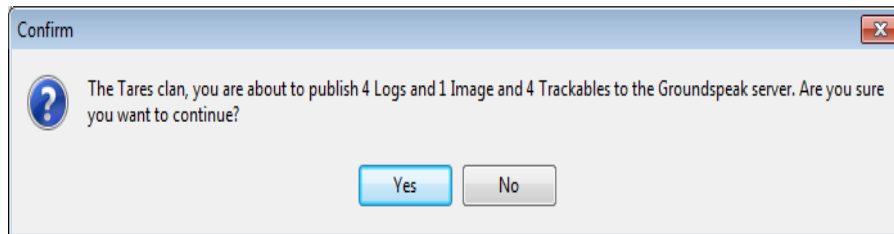


Figure 52 - Publish Logs Confirmation

Note	You should check that the user name is correct and that you are uploading the correct number of logs, images and trackables before you press Yes.
------	---

9.3.4 Refresh cache data

This is a very useful option if you are intending to go out caching or even if you simply wish to keep your database up to date. This option is used to get the latest information for caches in your database/filter directly from the Geocaching.com web site.

Note:	This option has a limit of 2,000 caches per hour and 6,000 caches per day (for Full details) and 10,000 caches per day (for Light). It uses the same API call as Get geocaches and hence is bound by the same limits. In addition, the API only gets the number of logs requested and unlike a PQ you are not guaranteed to get your log unless it is in the number of logs retrieved.
-------	--

9.3.5 Get recent logs

This option is very useful if you wish to have a lot of logs for a particular cache (you could get 9,999 if you really wanted!). This is handy if you have downloaded a PQ and then wish to get more logs.

9.3.6 Status Check

This is a very quick check for the status of a cache or filter. This is quicker than downloading cache data and actually does not impact your download balance for API usage.

10 Macros

Macros are a programming language that allow to extend the functionality of GSAK. They are out of scope of this document but there are plenty of macros which are already written. If you press Menu->Macro, you will see something similar to the following:

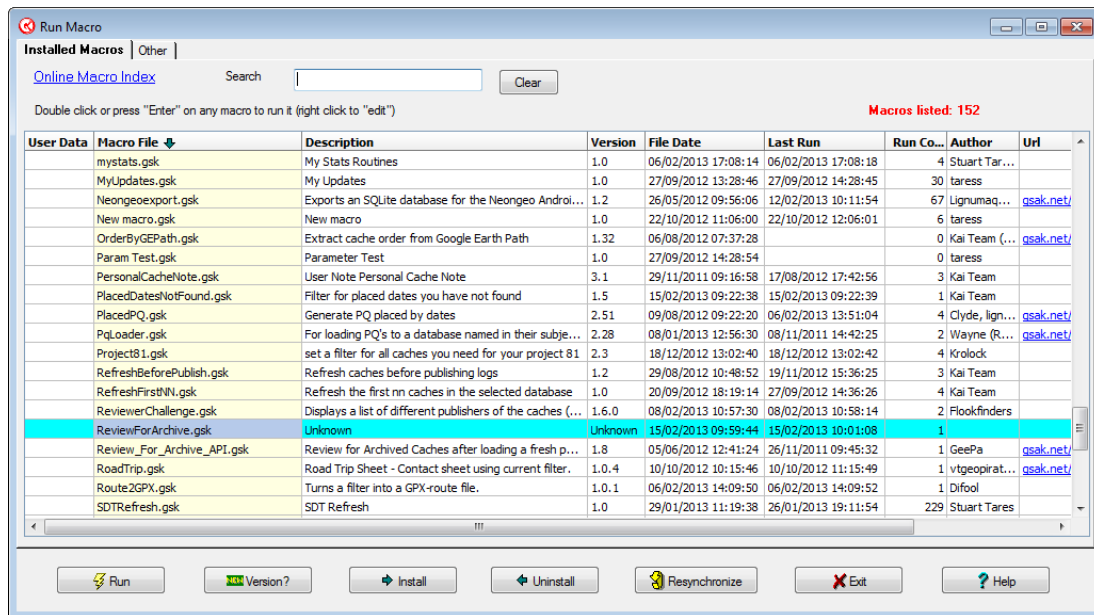


Figure 53 – Macros

If you click on the blue “Online Macro Index” you will be taken to an area where macros written by others are stored.

10.1 Useful Macros

The following are particularly useful macros which you may find helpful.

HTML_GoogleMapsNearest V3	This is used in the split screen and shows a Google map showing caches near currently selected cache
HTML_Google_Map_Elevation	This is used in the split screen and shows a Google map with elevation profile of interactively defined path
HTML_DualMap	This is used in the split screen and shows Google Map and SteetView as shown in Figure 13 – DualMaps
HTML_GoogleMapsNearest	This is used in the split screen and shows a map of the nearest caches to the elected cache.
HTML_WideView	This is what I use as default. It is an optimised split screen view.
myGMEv3	Google Maps Export. This shows a map in your browser which has a list of the caches in your filter.
FindStatsGen	Does pretty much whatever you want for generating statistics which

can then be used on your geocaching.com profile. Have a look at <http://www.geocaching.com/profile/default.aspx?u=The%20Tares%20Clan> for an example of what can be done.

GetCachesOnRoute	This is a route generation and boxing macro which uses the API to get caches along a route. It does this by dividing the route into a series of rectangular boxes and then grabbing the caches within each box.
CacheRoute3	This creates an optimised driving or walking routes for a series of caches.
GrabLogCoordinates	This simplifies the grabbing of coordinates from log text and from cache descriptions and automatically adding them as child waypoints. An example of the output can be seen in Figure 16