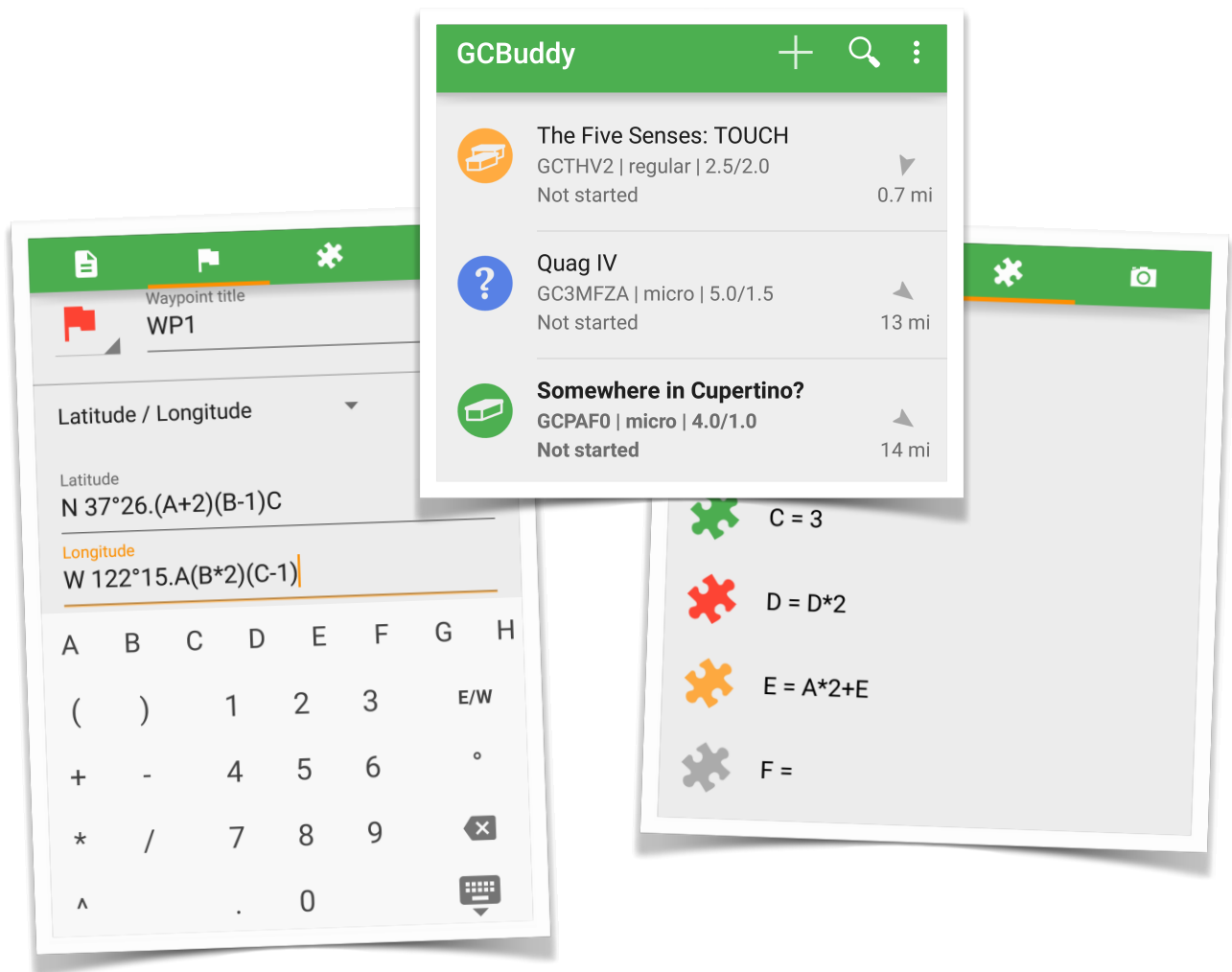


GC Buddy for Android

V10 Quick Start Guide



August, 2023

Introduction	3
Loading caches into the app	4
Add waypoint formulas	5
More about formulas	7
Edit using a browser	9
Everything prepared, let's go caching!	10
Remembering your answers (clues)	11
To the next waypoint	12
Taking photo's	13
Finally, the cache location	14
Send log to geocaching.com	15
Safeguard the information	16

Introduction



Geocaching Buddy helps you find a multi-cache. During the trip, the app remembers all the answers you discovered at the different waypoints. With these answers, new waypoints are calculated using longitude and latitude formulas. These formulas can be entered at home or during the trip, depending on when they are announced.

Have you solved the multi-cache then you can send yourself an email with all the information you found. Of course you can also leave the cache (override protected) in the app if you prefer. This way you can help others when they get stuck during a multi-cache trip that you have already solved.!

GCBuddy has a few convenient methods to show the caches near you and load specific caches into the app from geocaching.com or one of the opencaching servers. Then you can prepare these multi-caches at home before you start. All the images in the description will be saved on the phone so you can read them even when you don't have an internet connection. It is useful to prepare a cache at home because you have WiFi there and sometimes you have to take over a lot of waypoints.

Be aware that this app is not a typical geocaching app that imports thousands of caches and only then filters and sorts them. You normally only save the 'caches you have yet to find' list.

With this in mind we now dive into the details of GCBuddy!

Loading caches into the app

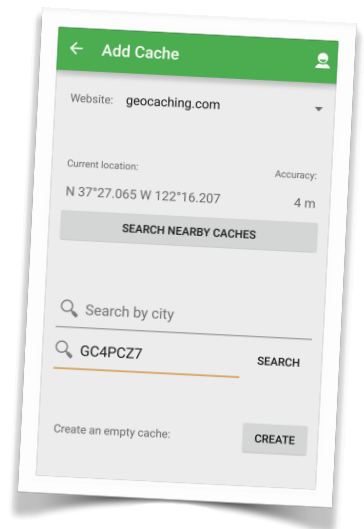
Search and load

When you start the app for the first time it doesn't contain any caches of course.

To put caches in the main list, use the "add cache" function (+).

Adding a cache can be done in several ways:

- Find caches around your current location
- Search in a city, around an address or lat/lon
- Add a cache of which you already know the cache code
- Add an empty cache that you will fill completely manually



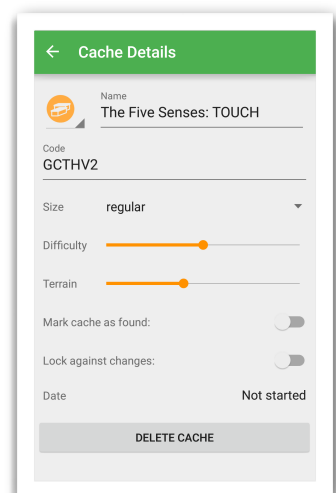
The search options depend on the type of [geocaching.com](https://www.geocaching.com) membership you have (Basic or Premium):

- Filter the search (Basic members have a fixed filter on Traditionals)
- Download the full description of a cache (Basic members 3/24 hr)

All opencaching sites do not have this limitation on type and number of caches per day.

Modifying the cache properties

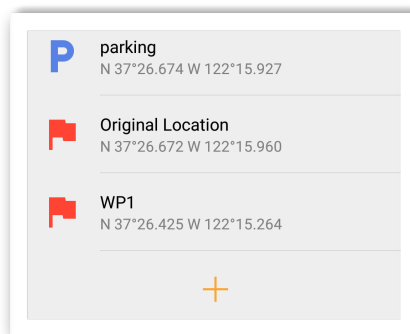
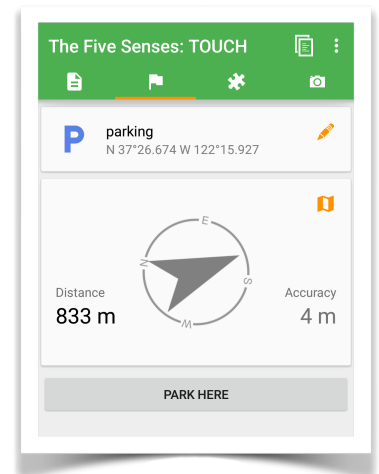
Once a cache is added to the main list you can change any property of it. Maybe you want to modify the name or maybe you've added a cache manually and want to specify the name, code, type, size, difficulty and terrain. Just select the cache and select the top part of the description of that cache to edit any property.



Add waypoint formulas

A special waypoint: the parking lot!

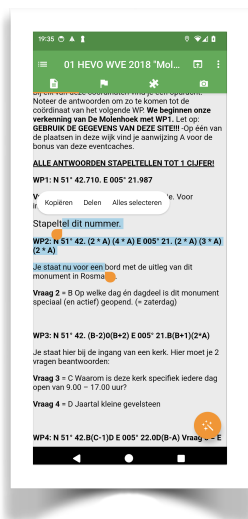
No matter how you travel (walking, cycling, by car), you must first move yourself to the beginning of a multi-cache! For traditional and earth caches, the cache location and parking space is often the same but sometimes the parking space in the description is different. In multi-caches, the beginning (the parking spot) is always in the description instead of the cache location itself. So the parking lot is seen as a special first waypoint and has its own special page. Once you have arrived you can also remember the exact parking location by using the "Park here" function.



Adding other waypoints

Multi-caches can contain many waypoints. Sometimes these waypoints are given in advance, sometimes you only discover them during the multi-cache trip itself. When the latitude and longitude of a waypoint are given in advance, they are often already in the loaded cache data and you do not have to enter them manually. But usually the next waypoints depend on a number of answers to be found (A,B,C, etc.). In such cases the latitude and longitude of the next waypoint are given as a formula in which the values for an answer occur. Usually these formulas are in the description of the cache but sometimes you only discover these formulas during the trip. GCBuddy makes it possible to enter the formulas both at home and outdoors during the trip itself.

Quickly add waypoints from the cache description



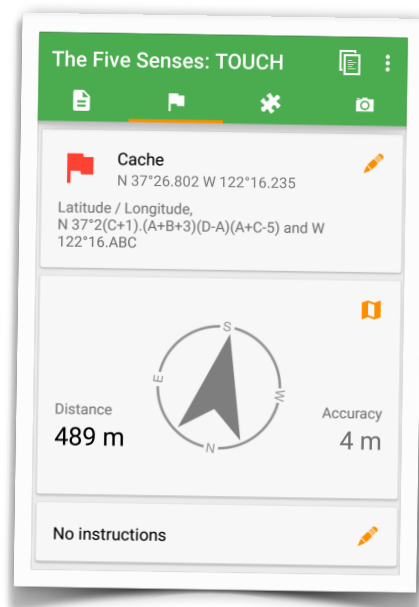
Usually the waypoints are described as a formula in the cache description. By selecting such a formula (you may select some text before and after) you can quickly add a waypoint (by clicking the appearing action button) where the app recognizes and cleans the formula.

Recognizing these formulas generally works well if the cache owner keeps to the 'normal' spelling of a location. If it is written too strangely then no action button will appear and you will have to use your human intelligence to find out what the cache owner means exactly.

The cache location

There is currently no facility on geocaching.com to enter a waypoint or cache formula in a standardized manner. While reading the cache description, human intelligence is needed to enter the waypoint formulas and cache formula manually.

The cache location is given in most multi's in the form of longitude and latitude formulas where complex calculations have to be performed on all the answers found during the trip.



Entering the cache location is thus done in the same way as adding a new waypoint. When using the action button in the description just select the cache as the waypoint to save the formula in.

The same navigation options are also available. So the cache is just 'the last waypoint' with the only limitation that you cannot change the name and type of waypoint.

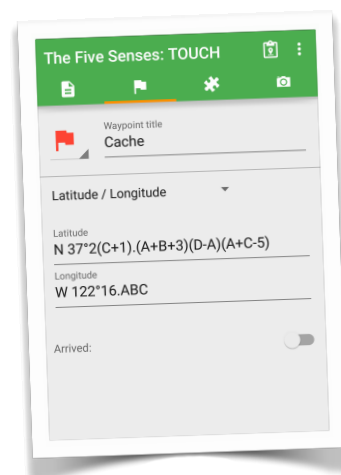
More about formulas

It just works!

The recognition of formulas contains such logic that it 'understands' what the cache maker meant.

The values for latitude and longitude are normally noted in the WGS84 format:

N 51° 23.123' E 004°12.345'



But all digits and/or the part before or behind the decimal point in the minutes can be replaced by simple or complicated formulas with the numerical value of A,B,C...Z as variables.

So it is possible to enter formulas such as:

N 5A° BC.(C-D)(B/2)(1958-C*B*0.25) E (A*4)°(A+B+C).(A*B*C/3)

The normal math priority sequence is used (^,+,-,*)

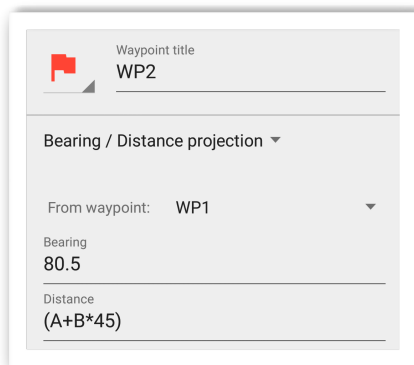
Note that if there is a decimal point present that is not in parentheses, the part before and the part after this decimal point will be calculated separately before the minutes are calculated.

Take for example the following latitude formula: N 51°12.345 + A

with A = 5

The formula calculation is done as a **human** geocacher expects: 5 is added to 345 and so the result is: N 51°12.350'

A purely mathematical approach would have led to N 51°17. 345 which would have put you in a completely wrong place, far away from the right place! If you want to add A to the minutes instead you would have to enter: N 51°(12+A).345 or alternatively: N 51°(12.345+A) where the part between the brackets is calculated in the mathematical way.



Projection and Offset

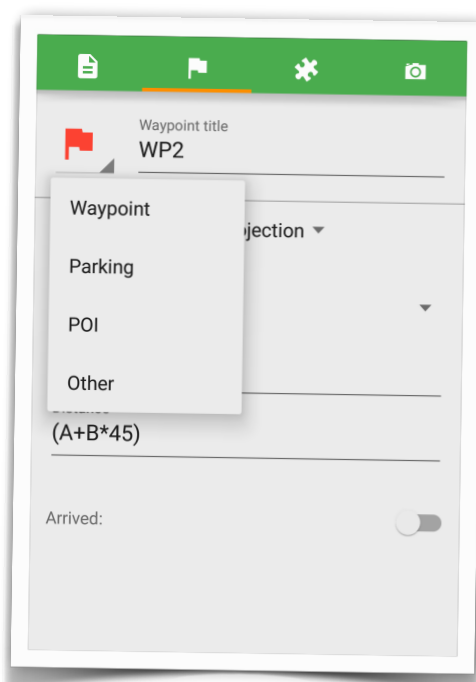
Two waypoint projection modes are supported:

- 1) By specifying a distance and bearing from another waypoint.
- 2) By adding an offset to both the latitude and longitude of another waypoint.

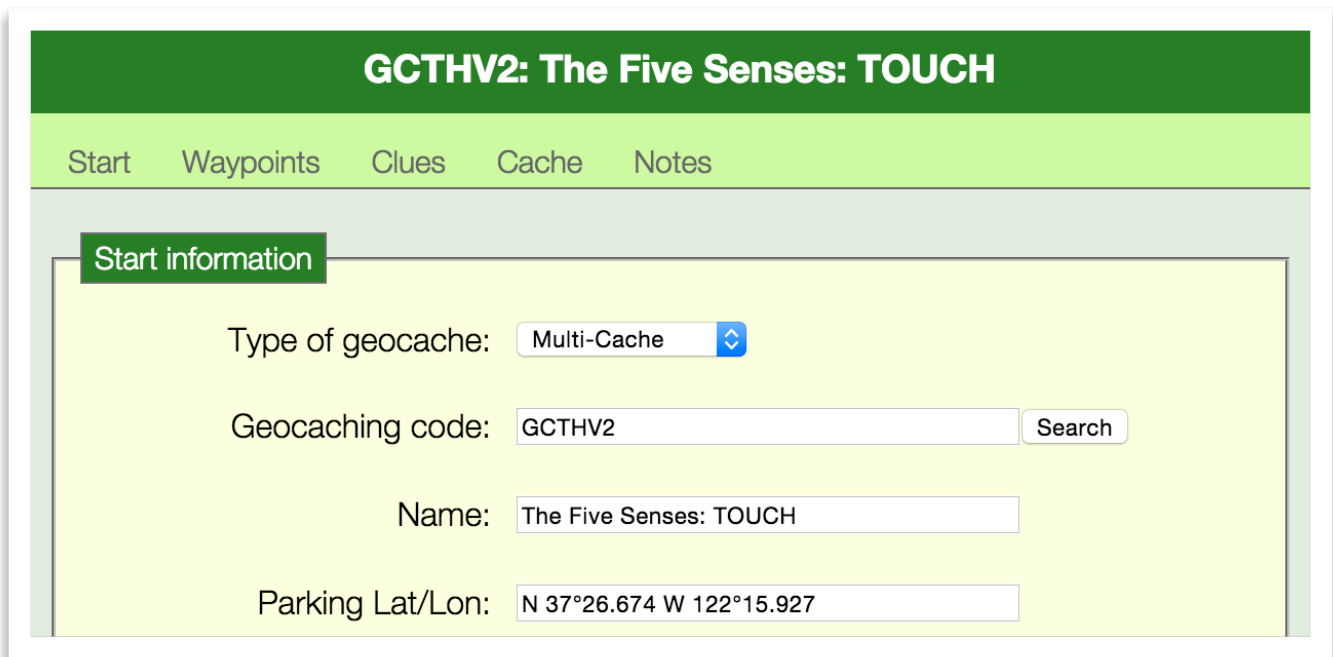
Types of waypoints

Most waypoints will just determine part of the entire route of a multi-cache. But maybe you will also get the location of an interesting point (POI) or an alternate parking lot or a via point (extra waypoint to walk along a certain route).

While changing a waypoint you can change the type by clicking on the icon. Each type of waypoint also has its own color on the overview map with all waypoints.



Edit using a browser



The screenshot shows a web interface for editing a geocache. At the top is a green header with the text "GCTHV2: The Five Senses: TOUCH". Below this is a light green navigation bar with tabs: "Start", "Waypoints", "Clues", "Cache", and "Notes". The "Start" tab is selected. Below the navigation bar is a yellow box titled "Start information" in a green header. Inside this box are four form fields: "Type of geocache:" with a dropdown menu showing "Multi-Cache", "Geocaching code:" with a text input containing "GCTHV2" and a "Search" button, "Name:" with a text input containing "The Five Senses: TOUCH", and "Parking Lat/Lon:" with a text input containing "N 37°26.674 W 122°15.927".

A dedicated **Web Server** built into GCBuddy can be enabled for the current cache, allowing editing that cache using a browser on a normal PC or Mac.

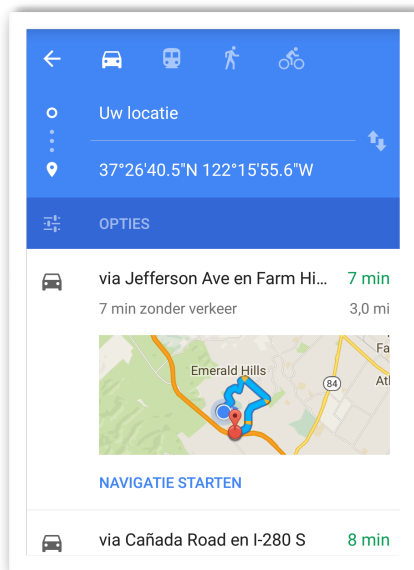
Your iPhone/iPad must be connected to your local WiFi network at home so it can be seen by other computers on that network.

Editing a cache this way is very easy: you can copy and paste formulas between the cache description and the browser and also enter the puzzles to solve at each waypoint as additional waypoint information.

A good preparation at home is a great way to help yourself when you later try to solve outside the multi-cache!

Everything prepared, let's go caching!

Navigate to the parking lot



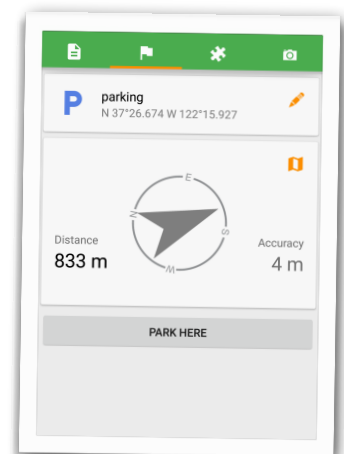
Google Maps

You can transfer the parking location to **Google Maps** in one click.

Internal Navigation

The internal navigation is done using a rotating compass in the waypoint details screen.

This shows the distance together with an **arrow** pointing in the direction of the destination.

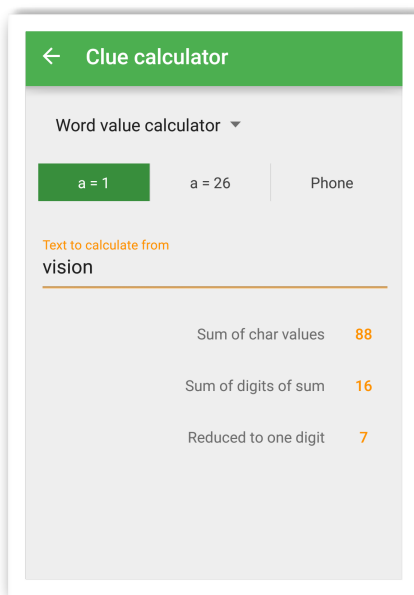


Remembering your answers (clues)

Solve the puzzle / answer a question

Multi-caches are characterised by the way each new waypoint is calculated from numbers found earlier during that trail. These numbers are stored in variables named A, B, C ... Z

So GCBuddy contains a list of these clues named A ... Z with the possibility to input a number, calculate a formula or enter the result of one of the built in conversion tools for each entry.



Text conversion

Some questions result in a word instead of a number. The text conversion tool supports that: enter the text and the tool will calculate the outcome of the sum of all character values.

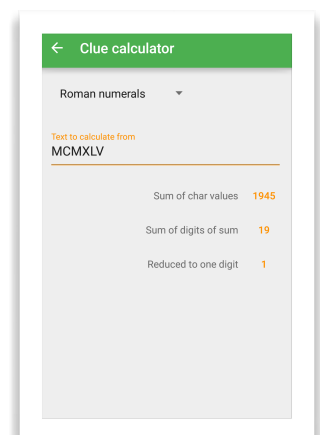
Options are:

- a=1, b=2, ... z=26 etc.
- a=26, b=25, ... z=1
- abc=2, def = 3, ... wxyz = 9 (phonepad)
- Sum of digits and sum of digits until 1 digit remains are all supported.

Roman numbers

Often a roman number on a building has to be converted to the decimal system.

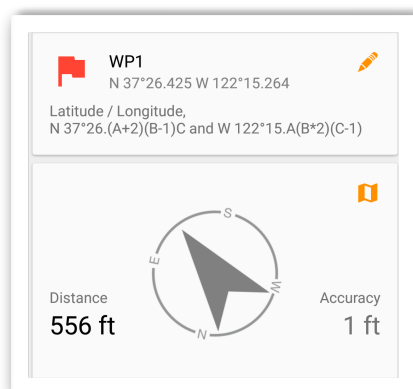
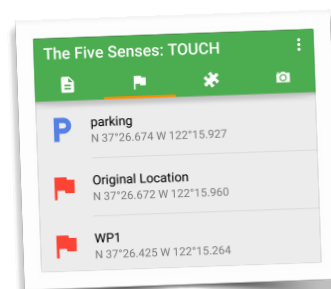
The Roman number calculator does just that so the result can be saved in one of the clue entries.



To the next waypoint

Automatic formula evaluation

Formula's for the latitude, longitude, distance, bearing or offset are evaluated the moment the clue values involved are known. So answering the questions reveal one or more new waypoints.

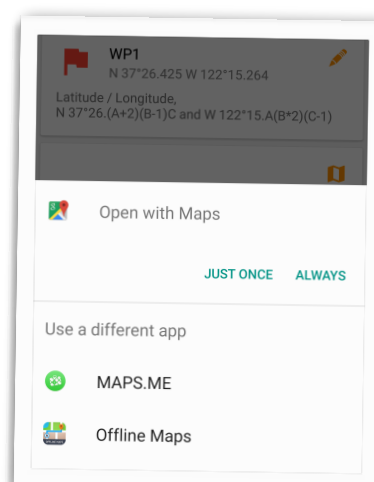


Use the compass

For navigation between waypoints the built-in navigation screen works best. It shows the distance and bearing to the destination. A simple compass face with an arrow pointing you in the right direction will guide you to the next waypoint.

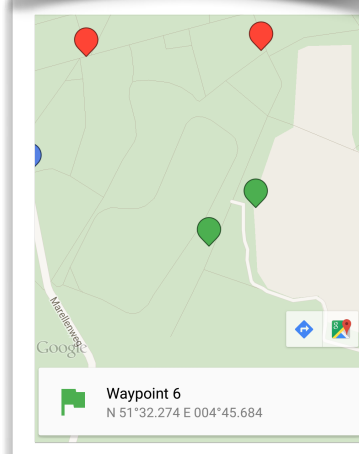
Use an external map

In some circumstances (e.g. in a town or when a lot of small rivers are present) it is better to see the next waypoint on a map. This can be the standard Google map app or one of the alternative maps (e.g. Google maps, Organic maps,...). When internet access is restricted one of the offline Map apps can be convenient. Don't forget to preload them with the necessary map information when you still had internet access!



Internal waypoint overview map

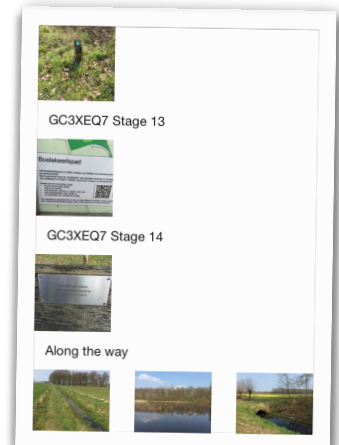
GCBuddy also contains a map view in order to show all waypoints on an internal Google Maps powered map. Click the map icon in the waypoints screen. Coloured icons show the visited and still unvisited waypoints.



Taking photo's

Document the waypoint info

In some cases you absolutely want to be sure you caught all information from a waypoint. A built in camera can be used to store high resolution photo's from the things found on a specific waypoint.



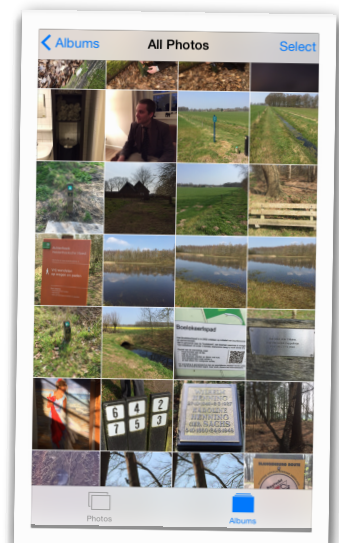
Looking back

Each photo taken from GCBuddy is added to a list of photo's you can investigate later. **Ultra-deep**

zooming and panning is supported so you can read that small detail you missed earlier! The overview window shows all pictures taken sorted by each waypoint and other pictures taken along the way.

A copy in the camera roll

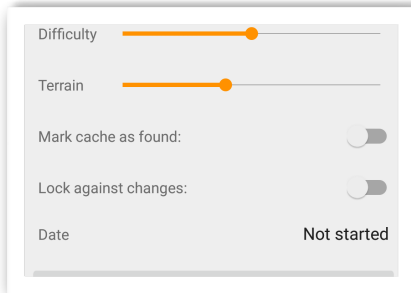
When walking towards a waypoint some snapshots may be taken of beautiful places or other interesting things. **All** pictures taken from within the app are also copied to the camera roll so they can easily be retrieved from your phone. These copies are still available after removal of the geocache entry from the list.



Finally, the cache location

The final waypoint

The cache location is 'just another waypoint' although typically the last one you will visit. So all features available for finding a waypoint are also present for the cache location itself.



Mark the cache found

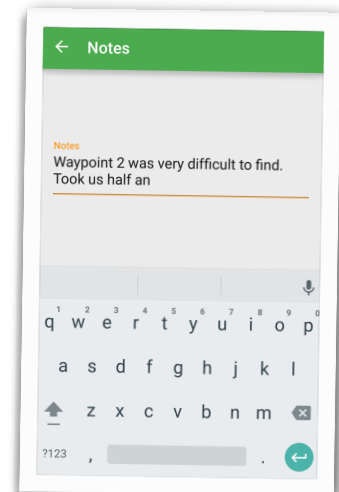
Each time you arrive at a waypoint with the waypoint details screen active, that waypoint will be marked as visited (you can manually control that also).

For the cache this is somewhat different, you first have to find the hidden cache so here you specify whether you have found it or not manually. The status and date is shown in the main cache list.

Write some notes

The Notes section can be used at any time to write something about the cache. It is an extra memo field to jot down anything you might want to remember for this cache.

You can also use it to remember the text you might want to add to the log once you have completed this cache.



Send log to geocaching.com

Add a new log

This screen allows you to specify the log type (Found it, Didn't find it etc.) and log date/time.

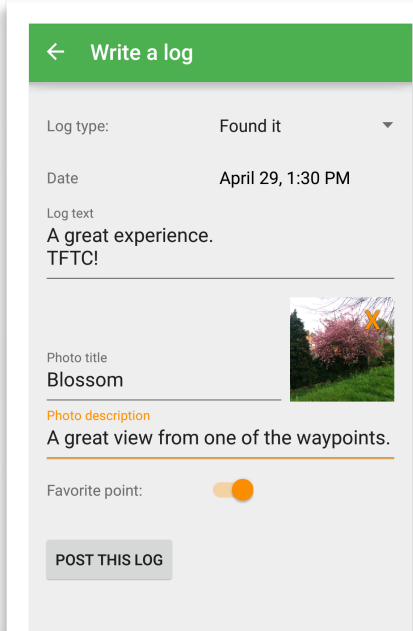
If you want to send a photo with the log, you can select one from the photo library on your device or choose to take a new picture. Title and description can be entered as well.

The switch labeled Add to your favorites gives you the opportunity to show your appreciation for this cache.

Submitting the log

The "Submit Log Entry" button will store the log on the device and once an internet connection is available this log will be transferred to geocaching.com.

The app's badge reminds you when there are one or more logs pending for upload to geocaching.com. Uploading will be done at a later moment when internet is available again.



The screenshot shows the 'Write a log' screen in the geocaching app. At the top is a green header with a back arrow and the text 'Write a log'. Below this, the 'Log type' is set to 'Found it' with a dropdown arrow. The 'Date' is 'April 29, 1:30 PM'. The 'Log text' field contains 'A great experience. TFTC!'. There is a photo of a pink blossom tree with a yellow 'X' mark in the top right corner. Below the photo, the 'Photo title' is 'Blossom' and the 'Photo description' is 'A great view from one of the waypoints.'. At the bottom, there is a 'Favorite point:' toggle switch which is turned on (orange). A 'POST THIS LOG' button is at the very bottom.

Safeguard the information

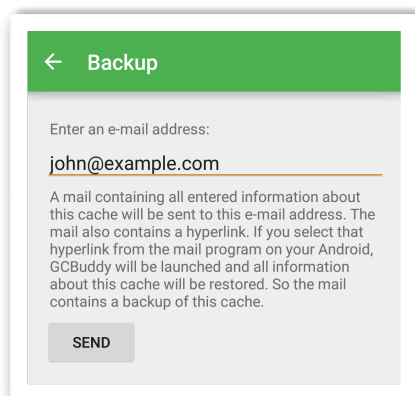
Autosave

Every minute an autosave is performed to minimize the chance of data loss, even in the case of an (unlikely) crash of the app or your phone.

Also when closing the app all information is written to the phone's permanent storage.

Write protect

If you want to prevent any further changes to a cache, go into the cache properties screen and switch on the write protection switch. This will safeguard that cache against any further changes and deletion.



Mail yourself a backup

GCBuddy is meant to keep only the currently active caches around. Having more as a few hundred of caches makes the app slower and less convenient to use. But in order not to lose the information you've gathered you can e-mail a backup to a mail account. You can organise these mails using the standard tools available in your mail program.

The mails contain user readable text with all clues, waypoints and cache location. Also some convenience links are present which allow you to quickly jump to the geocaching.com site for logging your cache.

Restoring a backup from an e-mail

A special link is present in the sent mail which allows you to restore all information in GCBuddy for that cache. View the mail in a mail program on your phone and click the restore link. GCBuddy will be started and all information (except the photo's) will be restored in GCBuddy. This e-mail information transfer is also a great way to transfer a prepared multi-cache to your partner's phone!

