



CHAIN Garmin eTrex 10 GPS User Manual

CHN 21: CHAIN Garmin eTrex10 User Manual

Purpose

The purpose of this SOP is to describe the standard procedures for using the CHAIN GPS device during the home visit.

Responsibility

This SOP applies to fieldworkers and home visitors. It is the responsibility of those users to follow the guidelines stipulated herein.

The Principal Investigator (through the study coordinator when applicable) retains the overall responsibility of implementation of these standard procedures.

The study clinical coordinator is responsible for answering questions you may have about the content of this SOP and any other relevant study documentation. Please contact that study clinical coordinator through your site coordinator.

Abbreviations/Definitions

CRF Case Report Form

Materials

- GPS Device – Garmin eTrex 10
- Computer with MapSource & BaseCamp Software Installed
- GoogleMap software installed (optional) but helpful to view tracks/points on map
- USB cable for Garmin eTrex 10
- **Household assessment CRF**

Methods

1.0 Setup: Before you start the journey, record in your notebook:

1.1 Date and Time

1.2 Number of the GPS machine

1.3 Patient study Number (or destination village if not tracing a subject)

The eTrex 10 uses two AA batteries, inserted at the back of the device. The cover is removed by turning the D ring on the back and sliding it off.

There is a black switch on the side of the device to switch it on. On the other side is a menu button and keys to scroll up and down. At the top right corner on the side of the device is a back button that takes you to the previous menu.

The black toggle at the top right of the screen can be used to navigate through the menu, highlighting the different options and then selecting by pressing down on the toggle.



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2.0 The GPS settings should be as follows:

- 2.1 **SYSTEM** settings: Select **Menu>Setup>System**
- 2.2 GPS-Set the GPS to Normal, A=WAAS/EGNOS or Demo Mode
- 2.3 LANGUAGE-English
- 2.4 BATTERY TYPE-AA battery

3.0 Then set the GPS to record a track of your journey: **Menu >Setup >Tracks**

- 3.1 Recording = On
- 3.2 Record interval = Auto
- 3.3 Resolution = High
- 3.4 Wrap when full = Yes (will not reach full if downloaded after each trip)

4.0 Instruction for participant GPS data handling procedures

1. Tracks and waypoints should be uploaded into the computer as soon as possible after they have been recorded on the GPS, ideally the same day.
2. Connect the GPS; open MapSource to show and transfer tracks and waypoints into MapSource. Switch off the GPS.
3. First save the file into the folder:

e.g. on a Windows OS - C:\CHAIN_GPS_DOCUMENTS\CHAIN_Mapping\CH20001043_a

using the study number as the file name and the letters a,b,c etc to specify whether it is the first, second or third visit (a=first visit, b=second visit, c=third visit d=fourth visit, etc.) , e.g. **CH20001043_a**

Save as Garmin GPS database format 3 (*.gdb) – this is the default

4. Delete built in **waypoints**
5. Rename the waypoints according to the types of waypoint specified. See the sheet for codes
6. Start with the name of the waypoint of the participant's house, this should be the same as the file name e.g. **CH20001043_a**
7. Save the file
8. Close MapSource
9. Open the folder **CHAIN_Mapping**

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10. Check the file name corresponds to the study participants study number
11. Save the file in the folder named **CHAIN_Mapping**
12. **If you have made a mistake, then close MapSource, switch on the GPS and upload the tracks and waypoints again (start from number 1)**
13. If the track is not regarding a participant but is also useful then label the waypoints as above. This track should be saved in

C:\ **CHAIN_GPS_DOCUMENTS\CHAIN_Mapping\Aneded_mapping**

The filename should be **villageName_DDMMYYYY** e.g., amberzuria_10Dec2016.

Use of the GPS device

We use the GPS primarily to record the exact location of the participant's house. Other useful information can also be gathered such as tracks of the area and local waypoints. The GPS collects the data in two ways: tracks and waypoints. Tracks are recorded automatically by the device as a sequence of co-ordinates. Waypoints are individual locations which you manually get the device to record. See below.

Before starting ensure previous data has been downloaded and deleted from the device.

To delete all data, you must delete both waypoints and tracks

Deleting Waypoints:

1. Select **Waypoints Manager**
2. Select a waypoint
3. Select **Menu >Delete> Yes**

Deleting Tracks:

1. Select **Track Manager**
2. Select a track
3. Select **Delete> Yes**

Turn on the GPS when you reach a point on the journey where the data will become useful.



MANAGING TRACKS

When you turn the GPS on it will start recording a track provided that you have set it to do so.

If only one track (i.e. to a participant's home) is required, then you can leave the GPS continuously recording.

If there is an additional task, such as visiting a chief's office after locating a study participant, then the first track can be saved by

Menu>tracks>save (it will give you the option of when you would like to save back until)

The subsequent track is then also saved in a similar manner.

WAYPOINTS (MOST IMPORTANT)

A waypoint is a location that you mark on the map. It can be an **address**, an **existing map feature**, a **point of interest**, an **empty spot on the map**, or **any other point you want**. You can use waypoints to mark places like your favourite restaurant, a friend's house, etc. The GPS will mark a waypoint when you tell it to.

In the CHAIN study, waypoints will be used to record the location of a participant's residence and/or helpful features for tracing a route to the participant's residence. They are also useful to record the location of local landmarks such as junctions, health posts and other features.

When creating a waypoint, you can save your current location as a waypoint

1. Select Mark Waypoint
 - ✓ To save the **waypoint** without change, select **Done**
 - ✓ To make changes to the waypoint, select an item to edit and select **Done**.

The GPS will then indicate what number it will mark it as, and when you select DONE the waypoint is marked.

In your notebook record:

The number that refers the waypoint is displayed by the GPS.

If it is a participant's, home then record this i.e. **CH20001043_a**

If it is a landmark, you will record sufficient detail of the landmark i.e., health post.

If you make a mistake when marking a waypoint, then record this in your notebook and re-mark the waypoint with the GPS and record again in the notebook with the new number. The GPS will always use a new number for each waypoint even if a previous one is deleted.



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Using the GPS to navigate back a participant's home

The GPS may be used to locate the participant's home on a follow-up visit (or any other waypoint that has been recorded). To do this open the MapSource program on the computer and choose the appropriate file i.e.

C:\CHAIN_GPS_DOCUMENTS\CHAIN_Mapping\CH20001043_a

Then connect the GPS with the cable and on the computer choose '**Send to Device**'
(**Transfer>Send to Device**)

Select 'waypoints' and 'tracks' in the choice of 'what to send'
Unplug the GPS

To use the GPS to find the way back to a participant's home (e.g. CH20001043_a)

Select:

Menu>**Waypoint Manager**

A list of waypoints is given, filed under begins: 0-9

Scroll to A-D > enter

Scroll to CH20001043_a > enter

Scroll to DONE > enter

The device will now display a screen with the name of the waypoint at the top, then the distance to the waypoint and a large compass pointing towards the waypoint. This 'compass' will only work when you are moving, with a clear view of the sky. The distance to the waypoint is very helpful to look at in addition to the 'compass'. Cycle through the screens as usual using the page button on the right side of the device and another screen will display any track that has been downloaded to the device.

Document history

Version 1	Author	Approved by	Dated	SOP No:
1.01 CHAIN GPS Machine Use SOP	KDT			CHN21
1.02	CKO		14 th Sep 2016	CHN21

Site training record

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All sites are required to maintain a master copy of this SOP that documents the site staff that have been trained on this SOP.

Document History				
Version No.	Trained staff initials	Signature of trained staff	Date	Trainer's Initials
1.01	KDT	Example row	1 st Jan 2016	DM