

# Trip Manager User's Guide<sup>1</sup>

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Trip Manager is a tool for users of the Garmin zumo XT or XT2 Satellite Navigation Devices<sup>2</sup>. It simplifies the transfer of navigation related data from computer to zumo and vice versa. It offers a number of useful and problem solving features, including interacting with zumo files via a large computer display, keyboard and mouse.

Trip Manager runs on Windows<sup>3</sup> based computers. Direct interaction with the zumo's data requires a zumo to computer connection via USB cable. Trip Manager's [optional] map view requires an active internet connection.

Trip Manager is free software. Users assume any and all risks related to use of the software. Trip Manager is not a Garmin product and is not endorsed or supported by Garmin Ltd. It was created and generously shared by a zumo user. See <https://github.com/FrankBijnen/TripManager> and <https://www.zumouserforums.co.uk/viewtopic.php?t=3150>

## Features

Trip Manager's features include:

- Enhanced file management with bi-directional file transfer between zumo and PC, multi-select support, logical file naming, organization, and grouping.
- Automatically or easily sets routes to "saved" rather than "imported" which prevents "RUT" behavior.
- Detailed viewing and editing of .trip file content including an overview on an Open Street Maps (OSM) map and a detailed hexadecimal view.
- Modification of trip dates, transportation modes and routing preference.
- Creation of trip files on the zumo directly from gpx files on the computer, including those created by Basecamp or other route planning software, eliminating the need to import and save routes and other data.
- Prevention of undesired Via and Shaping point renaming.
- Creation of gpi (poi) files from gpx files and to display gpi file information.
- Post-processing of gpx files including optional prefixing of shaping point names with route information.
- Visual comparison, on an OSM map, of trip file content on the zumo with a gpx file content on the computer. This allows a user to check that a zumo calculated route matches the route specified by the gpx file. Any desired adjustments can be made with sitting at a computer before beginning to travel rather than on the roadside when a problem arises.
- Routes can be shared with others using identical models of the zumo by sharing .trip files.

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<sup>1</sup> As of Trip Manager File Version 1.3.0.145, Compiler Version 36.0

<sup>2</sup> Garmin, zumo XT, zumo XT2 and Basecamp are trademarks of Garmin Ltd. or its subsidiaries.

<sup>3</sup> Windows is a trademark of Microsoft Corporation.

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## Initial One-Time Setup

### Software Installation

Run the Trip Manager setup exe as usual to install software on a Windows computer. When warned that the software is from an unknown publisher, choose to install anyway.

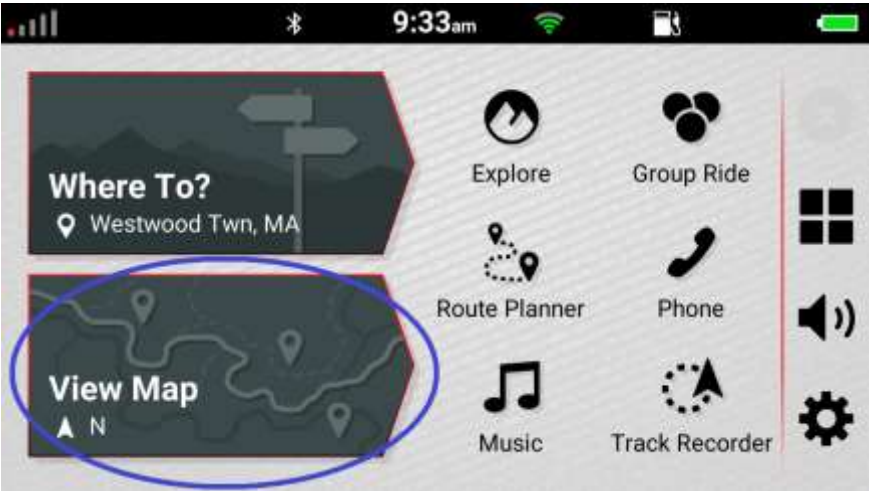
### Zumo Configuration

The zumo must be configured to:

- use the Multi-media Transfer Protocol (MTP) for connection with the computer, and
- enable display of its .System directory.

(XT2 shown, XT is similar)

Power on the zumo and select to view the map.



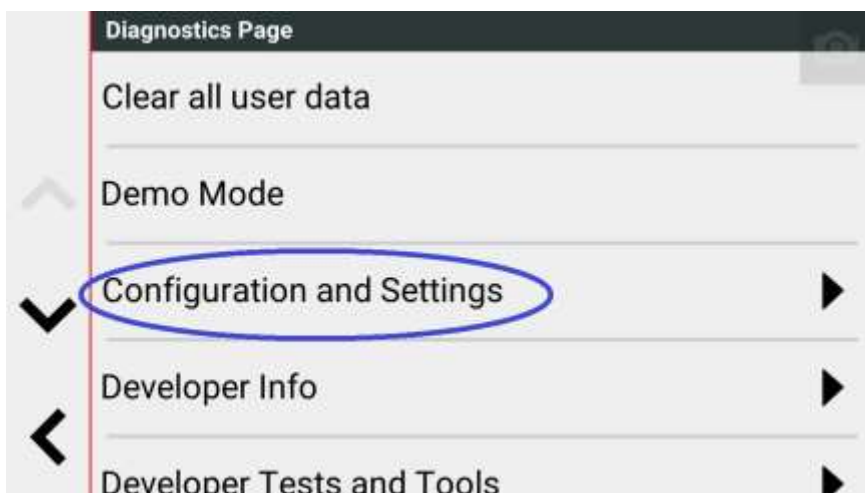
Click on the speed indication.



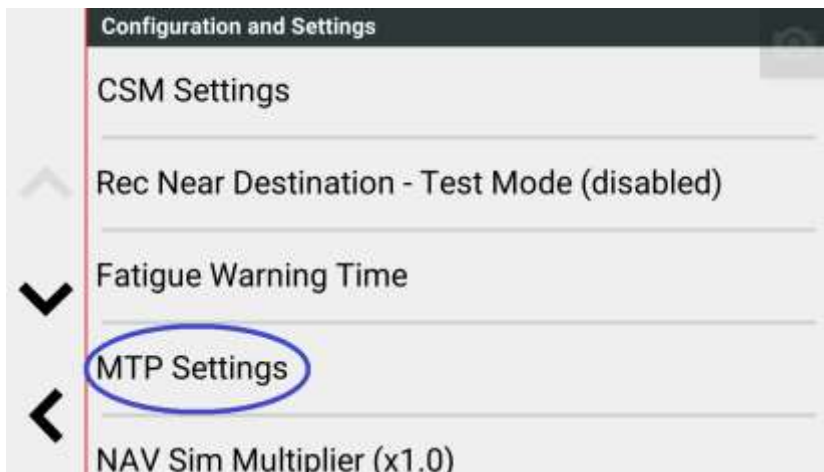
This brings up a detailed speed display. Long press, that is press and hold about 10 seconds, the speed circle.



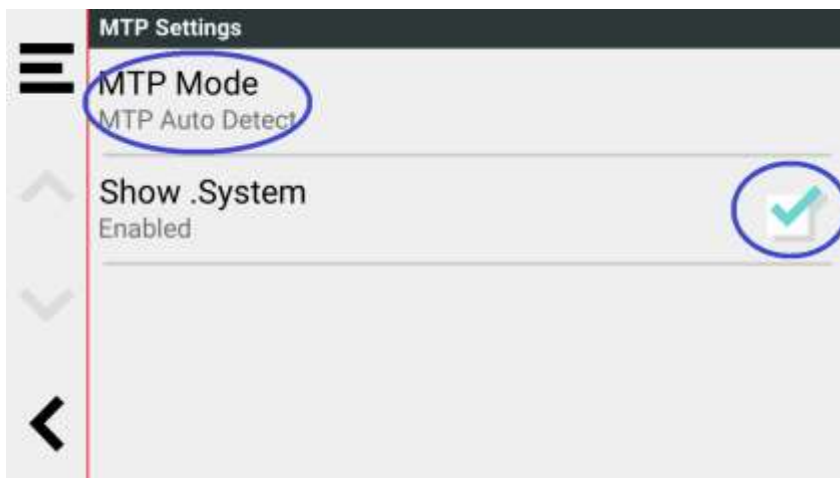
This brings up a Diagnostics Page. Click Configuration and Settings.



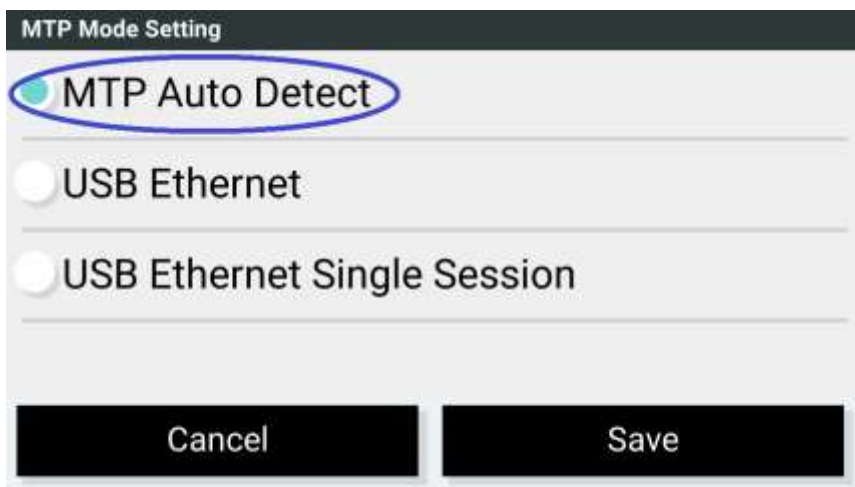
Then click MTP Settings.



Verify that MTP Mode is Auto Detect and Enable Show .System.



Set MTP Mode if needed.



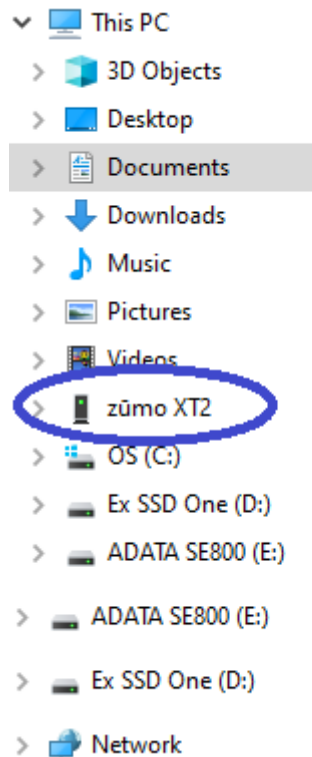
Save and return back to the main screen on the zumo.

If the zūmo is new, or has just been reset to Factory conditions, then the required directory for .trip file storage (e.g. zūmo XT2\Internal Storage\System\Trips) will not exist on the zūmo. It must be created before using Trip Manager. To do so either send a gpx file containing a route to the zūmo using any normal method or create a simple route using the Trip Planner on the zūmo.

One-Time configuration is now complete.

## Connect zūmo And Computer

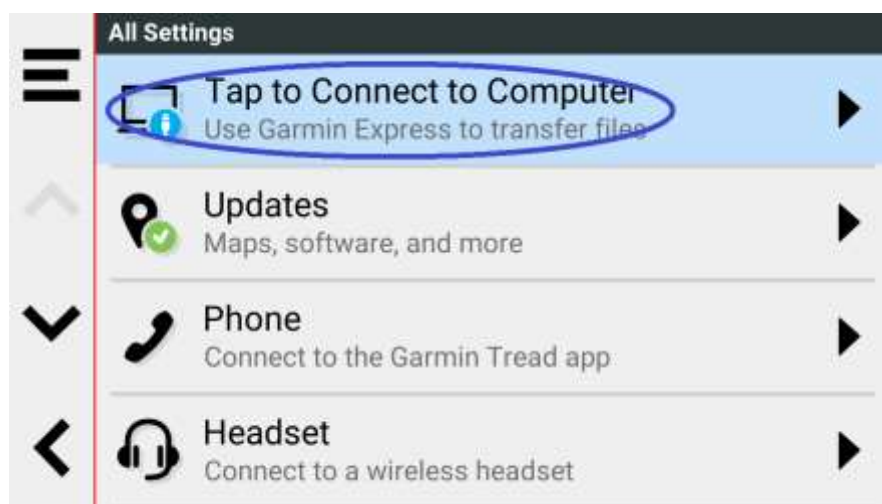
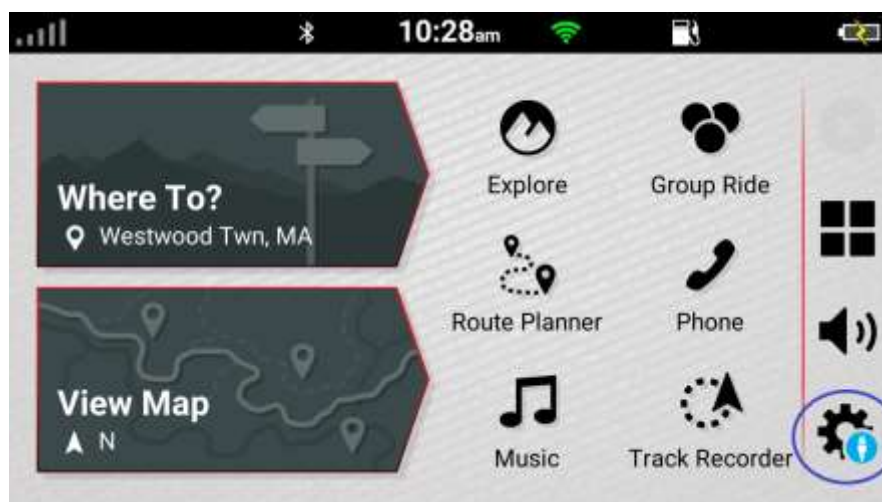
Connect a USB cable between the computer and the zūmo. Turn the zūmo on if it doesn't start automatically. It can take a minute for the computer to recognize the zūmo. Once it does, the zūmo will be visible in File Explorer.

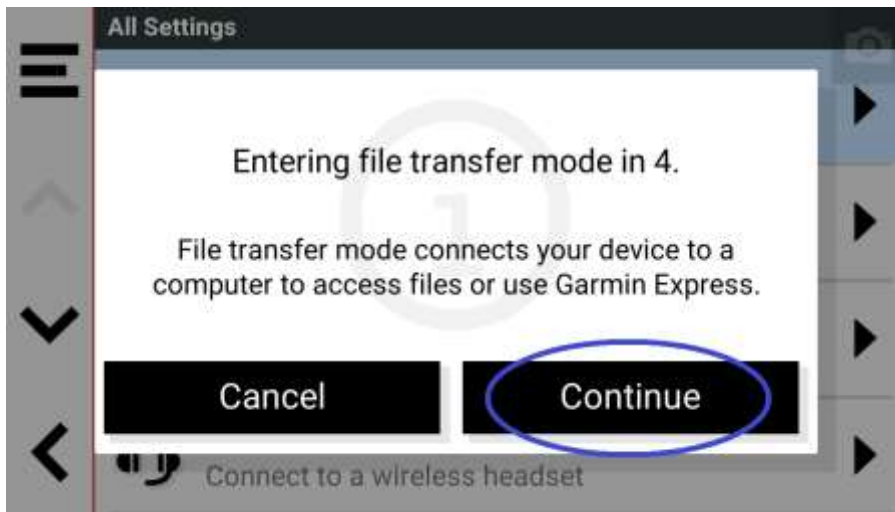


On the zumo screen, tap to connect to the computer if offered.



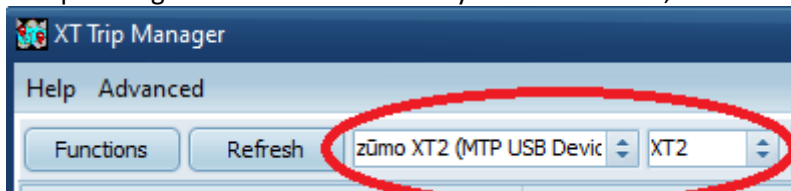
Or tap the Settings icon, then connect.





## Using Trip Manager

With configuration and connection completed, launch the Trip Manager software on the computer. If Trip Manager does not automatically select the zumo, select it at upper left and select XT or XT2 as appropriate.

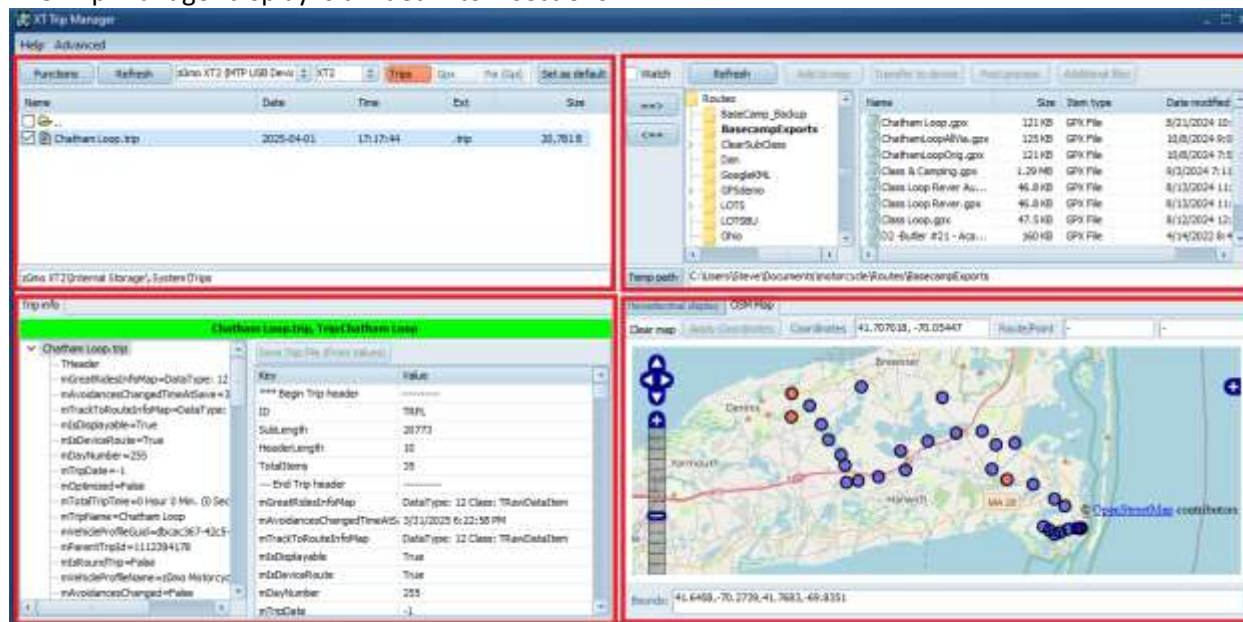


Note that if Trip Manager is started before the zumo connection to the computer completes, the zumo may not be shown as an available connection. In that case, click the Refresh button, then select the zumo.



## Display

The Trip Manager display is divided into 4 sections.



Upper Left: The zumo file system.

Upper Right: The computer file system.

Lower Left: Detailed information about a trip or gpx file selected in the upper left section.

Lower Right: Map display.

The user can navigate within each of the two file systems by clicking on files or directories in each of the upper sections and can perform simple file copy between the two systems using the ==> and <== buttons.

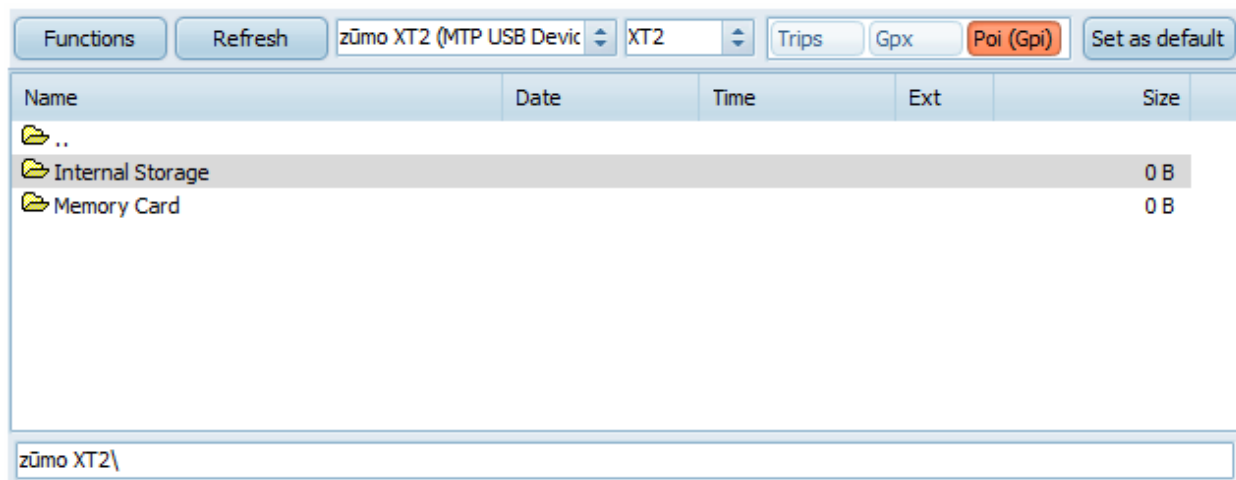
More important than simple file copy, Trip Manager offers a rich set of intelligent file and data transfer capabilities, file naming and creation options, and data manipulation functions.

## Zumo File System Navigation

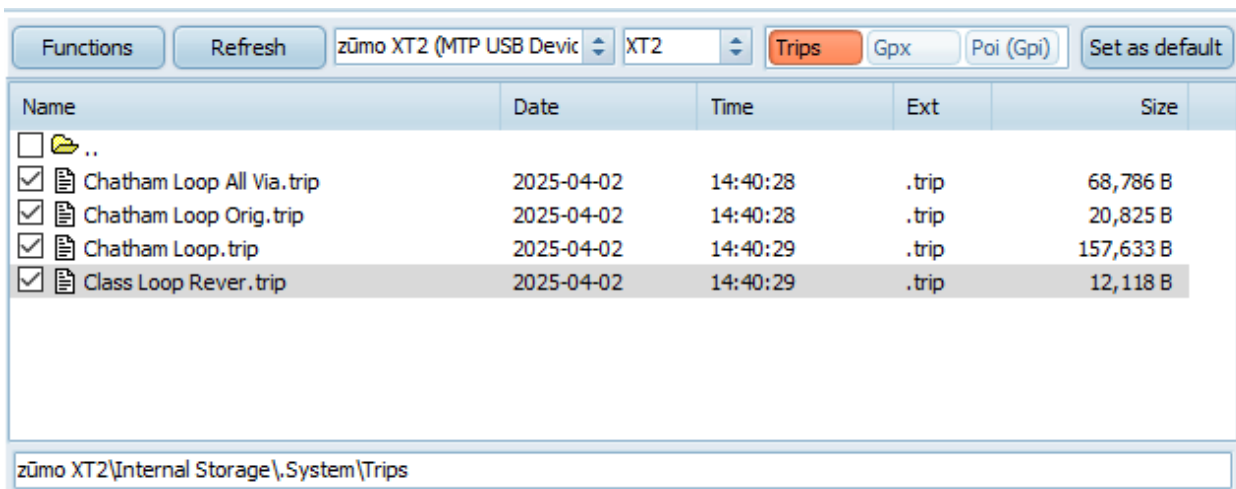
Display content can be sorted by clicking on the column headings.

The full path to the currently displayed folder is shown at the bottom of this section.

Double [left] clicking on any folder in the display will navigate to that folder. The “..” folder moves up to the parent directory. This can be used to navigate to the top of the file system or to any desired location. For example:

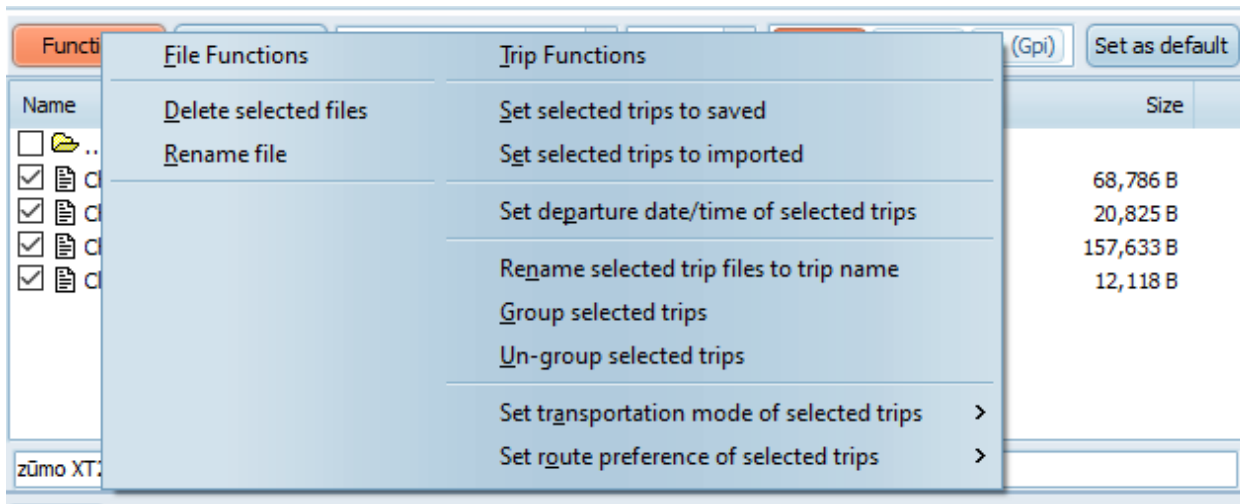


Selecting (left clicking on) a .trip file populates the lower left section of the display with that file's Trip Information and displays the trip on an OSM map in the lower right display area (internet connection required to download the map). Similarly selecting a gpi file displays that file's information, (More on those displays below.)

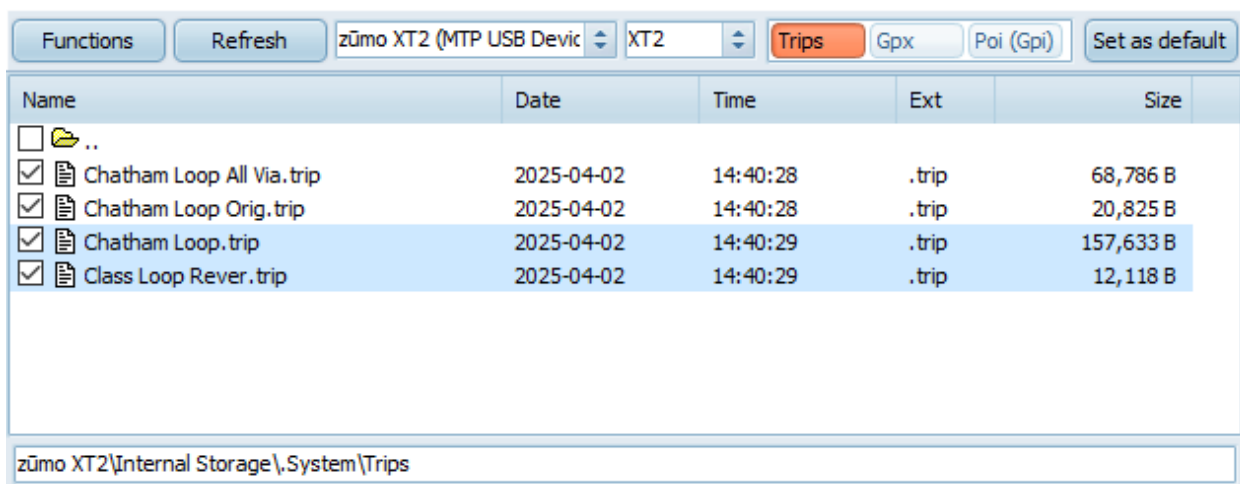


## Zumo File System Functions

The Functions Button at upper left brings up available File and Trip functions which will operate on selected file(s).



It is important to note here that “selected” files are those which are highlighted, not those with boxes checked. In the image below, only the lower two trip files are “selected”. The checked boxes indicate that all four files are “saved” rather than “imported” – this “RUT” fix feature is discussed below.



File selection using click, shift-click, control-click and control-a all work as usual for Windows files.

The file functions are obvious so require not further description here.

The trip functions, which are only available if trip file(s) have been navigated to, deserve further explanation.

**RUT fix - Set selected trips to saved / imported:** A trip (that is a route) which has been imported to the zumo, e.g. via a gpx file from Basecamp, an sd card or similar, is marked as “imported” (using the mImported field of the Trip info). A trip (route) which was created on the zumo, or otherwise saved on the zumo is “saved”, not “imported”. The checkbox at left of the file name indicates the status – a checked trip is saved; an unchecked trip is imported. This difference is important to avoiding Repeated U-Turn (RUT) behavior – See the zumo user forum and/or appendix for a discussion of RUT.

The individual checkboxes may be set or unset by clicking each as desired. The Set selected trips to saved / imported functions allow a selected set of trips to be set at once.

**Set departure date/time:** Setting date and time can help with the order for route display on the zumo, especially the original XT. The XT2 does provide several sorting options which are not available on the XT.

**Rename selected trip files to trip name:** The default trip file naming scheme used by the zumo is fairly meaningless to us humans. This function changed the name(s) of selected file(s) to the trip names, making the files much easier to identify.

Note that the ==> button can be used to copy selected trip files to the computer. This is useful for both backup and sharing routes, etc. with others. Note that .trip file format and content is zumo model specific. Trip files should only be shared among users of the same zumo model.

**Group / Un-group selected trips:** The zumo XT2 supports “Collections” which allow routes, tracks, etc. to be grouped together. The original XT does not support collections however.

This is an XT only function which allows multiple trips to be assembled into groups. It is not needed on, and does not work on, the XT2.

Although the standard XT interface apparently does not support trip grouping, Trip Manager does. Trips containing the same mParentId and mParentTripname will be shown grouped in the trip planner. To create a group:

1. In Trip Managers upper left display, select the trips to be grouped together.
2. Click the functions button then “Group selected trips”.
3. Enter a group name.

An “Un-group selected trips” function is also provided.

It is not possible to add trips to an existing group.

Multiple routes from a gpx file will automatically be grouped when using Trip Manager’s “Transfer to device”.

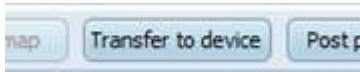
It is recommended to first rename trip files to trip name as described immediately above.

**Set transportation mode:** Allows selected trip(s) to be set to Automotive, Motorcycling or Offroad. See the Garmin zumo documentation and the Garmin user forum for more information regarding transportation modes. Note that the XT2 only supports Motorcycling. Both the XT and XT2 will default to Motorcycling if the mode is set to anything unsupported.

**Set route preference:** Allows selected trip(s) to be set to Faster time, Shorter distance, Direct routing or Curvy roads. See the Garmin zumo documentation and the Garmin user forum for further information regarding routing preference choices.

# Setting Default File Destinations

The Transfer to device button,



which is discussed further below, provides intelligent, enhanced, transfer of navigation data from gpx files on the computer to multiple files on the zumo. The default locations for the relevant files are:

Trips: zūmo XT2\Internal Storage\System\Trips

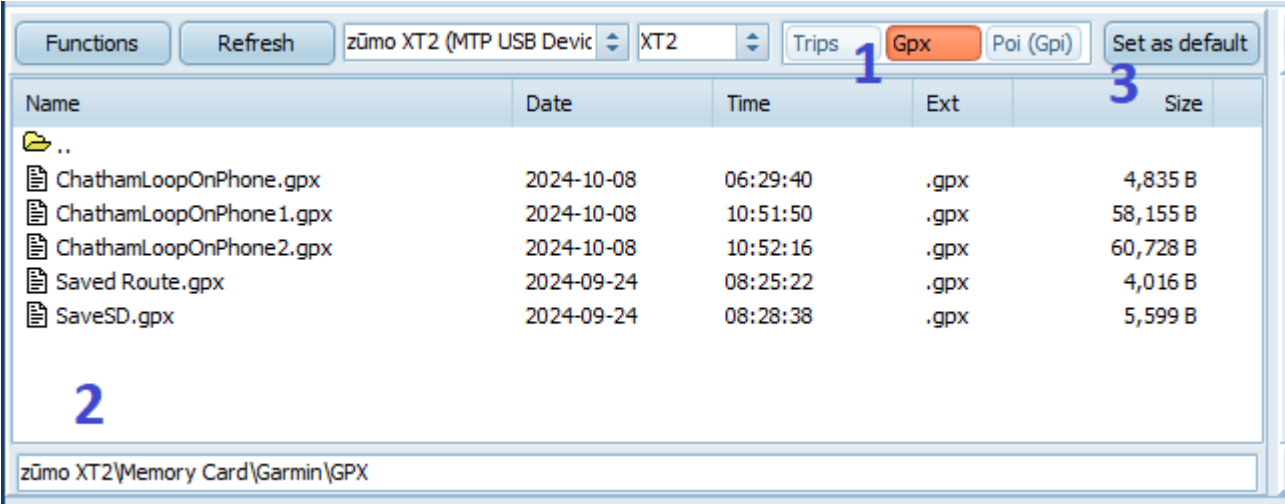
Gpx: zūmo XT2\Internal Storage\GPX

Poi (Gpi): zūmo XT2\Internal Storage\POI

If desired, alternate locations can be configured by Trip Manager users. For example, a user may desire to send gpx files to the memory [sd] card rather than internal storage, that is to zūmo XT2\Memory Card\Garmin\GPX.

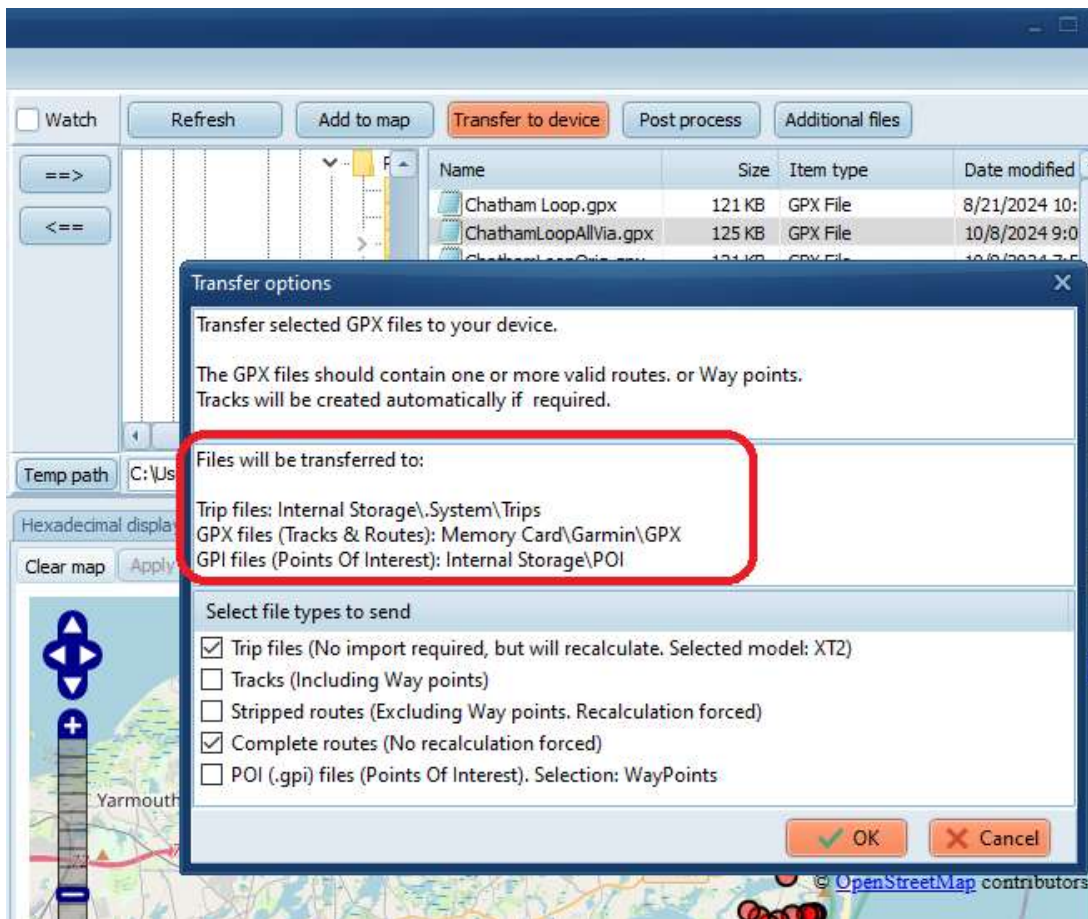
The buttons at upper right of the zumo file system section of the display are used to do so.

For the above example (1) click on the Gpx button, (2) navigate to the desired destination for transfer of gpx files, and (3) click the Set as Default button.

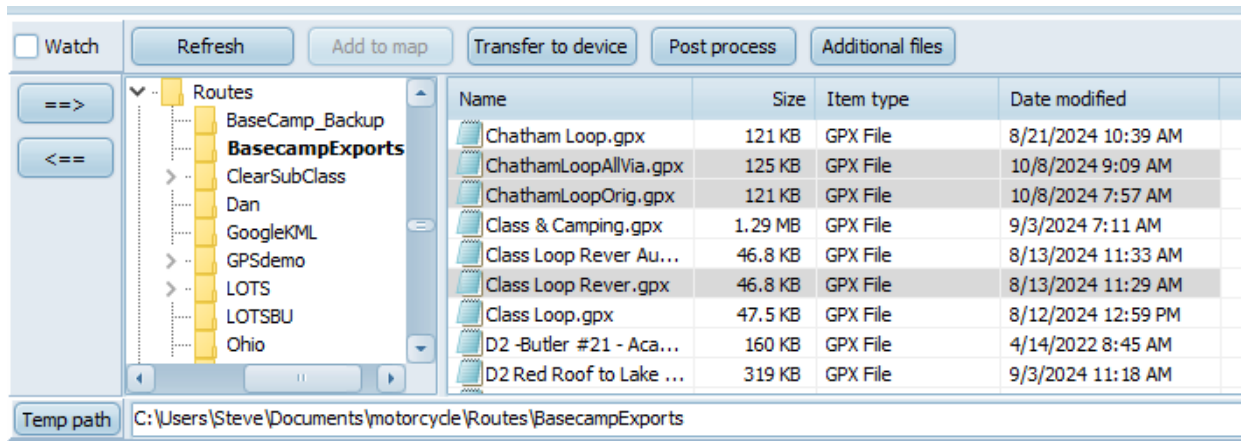


It is important to note here that the zumo expects certain files and file types to be in specific locations. Trip Manager provides great flexibility here, but the zumo may not be able to find files placed in improper locations.

Clicking on the Transfer to device button will always show the currently configured destinations for each file type.



## Computer File System Navigation and Functions



Basic file and folder navigation here works the same way it does elsewhere on the Windows computer. The current folder path is shown at the bottom of this section.

Right clicking on a file brings up the standard Windows context menu for files allowing the user to Open, Edit, Rename, etc.

**The Temp path button:** This is primarily a diagnostic tool for debugging. Trip Manager creates temporary files for internal use. This button opens a Windows File Explorer window to the directory containing those files.

**Arrow buttons:** As noted above, the ==> and <== buttons perform simple file copy between the zumo and the computer.

**The Watch checkbox:** When checked, Trip Manager will watch for changes to the selected directory. If a gpx file is exported and saved to that directory, Trip Manager will automatically open the post process dialog (see Post Process below).

**Add to map:** will display the content of selected gpx file(s) on the OSM map display (internet connection required to download the map).

**Compare trip and gpx:** This is a significant feature of Trip manager allowing the user to verify that a zumo calculated route is consistent with the gpx specified route. Any differences can be detected and resolved while route planning at a computer on a desk, rather than while out on the side of the road.

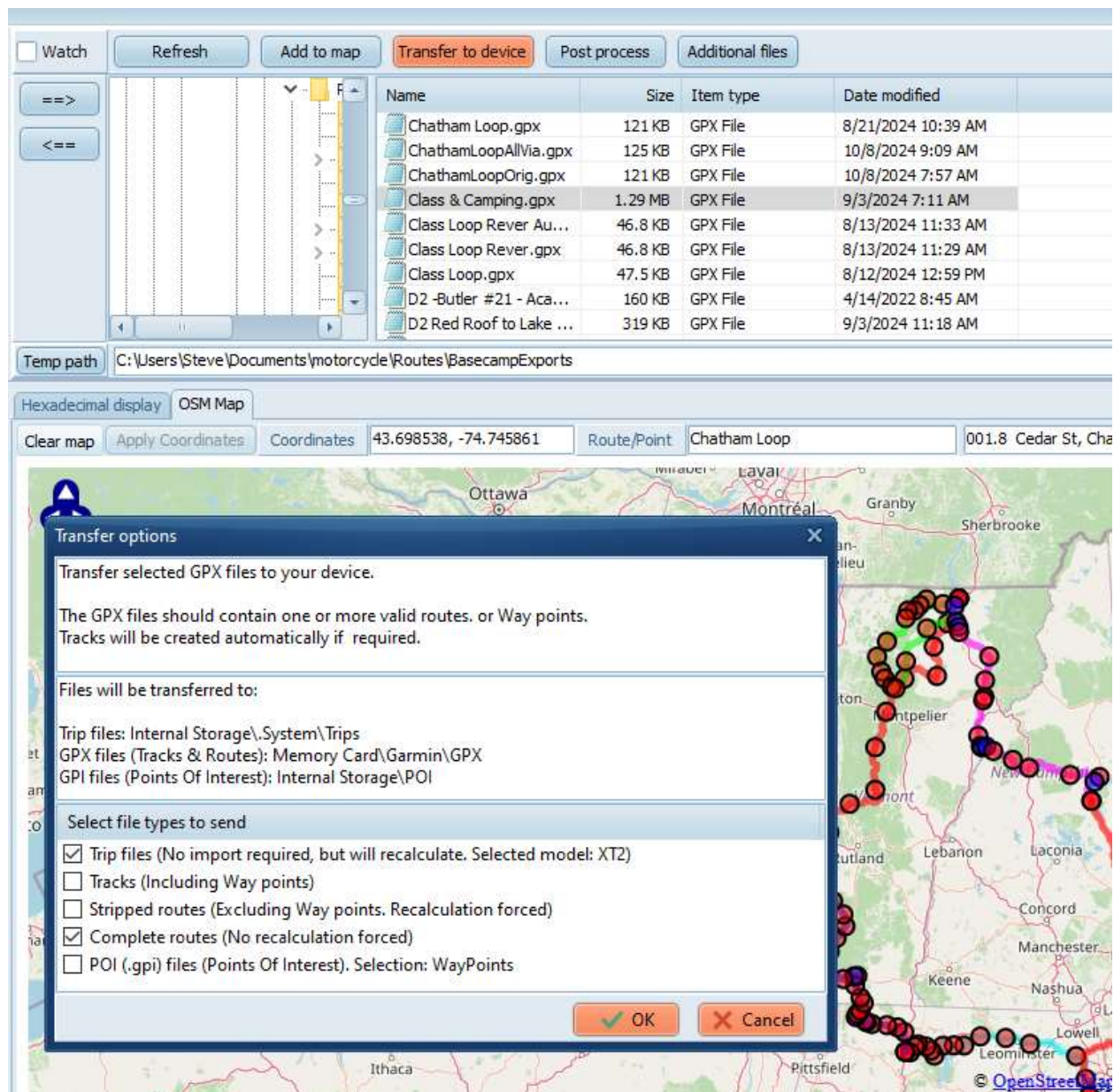
To compare and verify:

1. Transfer the gpx file(s) to the zumo using the desired method. See "Transfer to device" below which is the recommended method.
2. Open the route(s) on the zumo so that the zumo will [re]calculate it (them).  
(Note that this requires restarting the zumo and not connecting to the PC.)
3. [Re]connect the zumo and PC.
4. Select both a trip file on the zumo (upper left display) and corresponding gpx file on the PC (upper right display). This will simultaneously show both versions of the route on the OSM map so that any differences are easy to see.

Route differences, if any, are generally resolved by adding shaping or via points to the gpx route in order to force the zumo's route calculations to produce the desired route. Note that although Trip Manager is a very powerful tool, it is not a route planner. Adding shaping or via points to a route must be performed outside of Trip Manager.



**Transfer to device:** Trip manager provides direct transfer of gpx file(s) from the computer to the connected zumo with a number of advantages. Several optional additions are available, as indicated by the dialog box which pops up.



Trips transferred using the Transfer to device function are automatically set to “saved” to avoid RUT.

There are a number of techniques available to transfer routes to navigation devices such as the zumo. They depend, to some extent on the content available in the original gpx file(s) and the desired results. There are pros and cons to each. “Routes, Tracks, Conversions and Transfer Techniques” in the Appendix discusses several route transfer techniques applicable to Trip Manager.

**Post Process:** While not required, the optional post processing of gpx file content offers several useful modifications to the content of selected, previously created, gpx files on the computer. The gpx file may have been exported from Basecamp or any other route planning application. (For MRA export using the gpx 1.1 route + track + poi option)

Select the desired gpx file(s) on the computer using Trip Manager’s upper right display, then click “Post process” button.



**Note that the gpx file(s) will be modified “in place”. Save a backup file of the original gpx file before proceeding if desired.**

Post processing will:

- Clear the subclass field. Thereby preventing a renaming of Via and Shaping points by the zumo.
- Put the shaping points ‘on the road’, which can avoid routing errors.
- Optionally rename the Begin, End and shaping points assigning a category. (Via points are never renamed by this post processing.) A few shaping point renaming options are available. For example if the routename is ‘tripmanager-demo’, shaping points can be named ‘tripmanagerdemo\_010 Km, (025 Km etc.)’ or ‘tripmanager-demo\_001, (002, 003 etc)’. There are also options to start the name with the distance, or have the distance in Miles.
- Optionally Waypoints can be assigned categories. EG: SYM:<name of symbol> GPX:<name of GPXfile> This makes finding waypoints (aka saved locations or favorites) easier on the XT.

Post processed gpx files can be imported back into Basecamp or other application to view the post processed changes. Note that when importing routes or other data into Basecamp if an element of the same name already exists, it will cause “-1” to be added to names of the newly imported data.

Trip Manager supports Drag and Drop. Dragging a gpx file into Trip Manager will automatically open the post process dialog. Dragging a gpx file from Trip Manager into Basecamp will start the import. See also the “Watch checkbox” discussion above. With that selected, exporting a gpx file from Basecamp or another application into that directory will automatically open the post processing dialog (if Trip Manager is open on the computer).

☐ Watch
 Refresh
 Add to map
 Transfer to device
 Post process
 Additional files

==>
 <==

Name	Size	Item type	Date modified
Chatham Loop.gpx	121 KB	GPX File	8/21/2024 10:39 AM
ChathamLoopAllVia.gpx	125 KB	GPX File	10/8/2024 9:09 AM
ChathamLoopOrig.gpx	121 KB	GPX File	10/8/2024 7:57 AM
Class & Camping.gpx	1.29 MB	GPX File	9/3/2024 7:11 AM
Class Loop Rever Au...	46.8 KB	GPX File	8/13/2024 11:33 AM
Class Loop Rever.gpx	46.8 KB	GPX File	8/13/2024 11:29 AM
Class Loop.gpx	47.5 KB	GPX File	8/12/2024 12:59 PM
D2 -Butler #21 - Aca...	160 KB	GPX File	4/14/2022 8:45 AM
D2 Red Roof to Lake ...	319 KB	GPX File	9/3/2024 11:18 AM

Temp path C:\Users\Steve\Documents\motorcycle\Routes\BasecampExports

Hexadecimal display
 OSM Map

Clear map
 Apply Coordinates
 Coordinates 44.344591, -68.467977
 Route/Point Chatham Loop
 001.8 Cedar St,

Post processing parameters
 ✕

Post processing a gpx file does this.

with Routes:

- It clears the subclass field for Via and Shaping points. Prevents renaming on the XT
- It puts the Shaping points on the road. AKA unglitching

Optionally:

- It renames the Begin and End points and assigns symbols.
- It renames Shaping points to route name + Seq or route + Distance

with Way points:

Optionally:

- It assigns categories based on the GPX filename and the symbol used.

Waypoints are listed by category on the XT

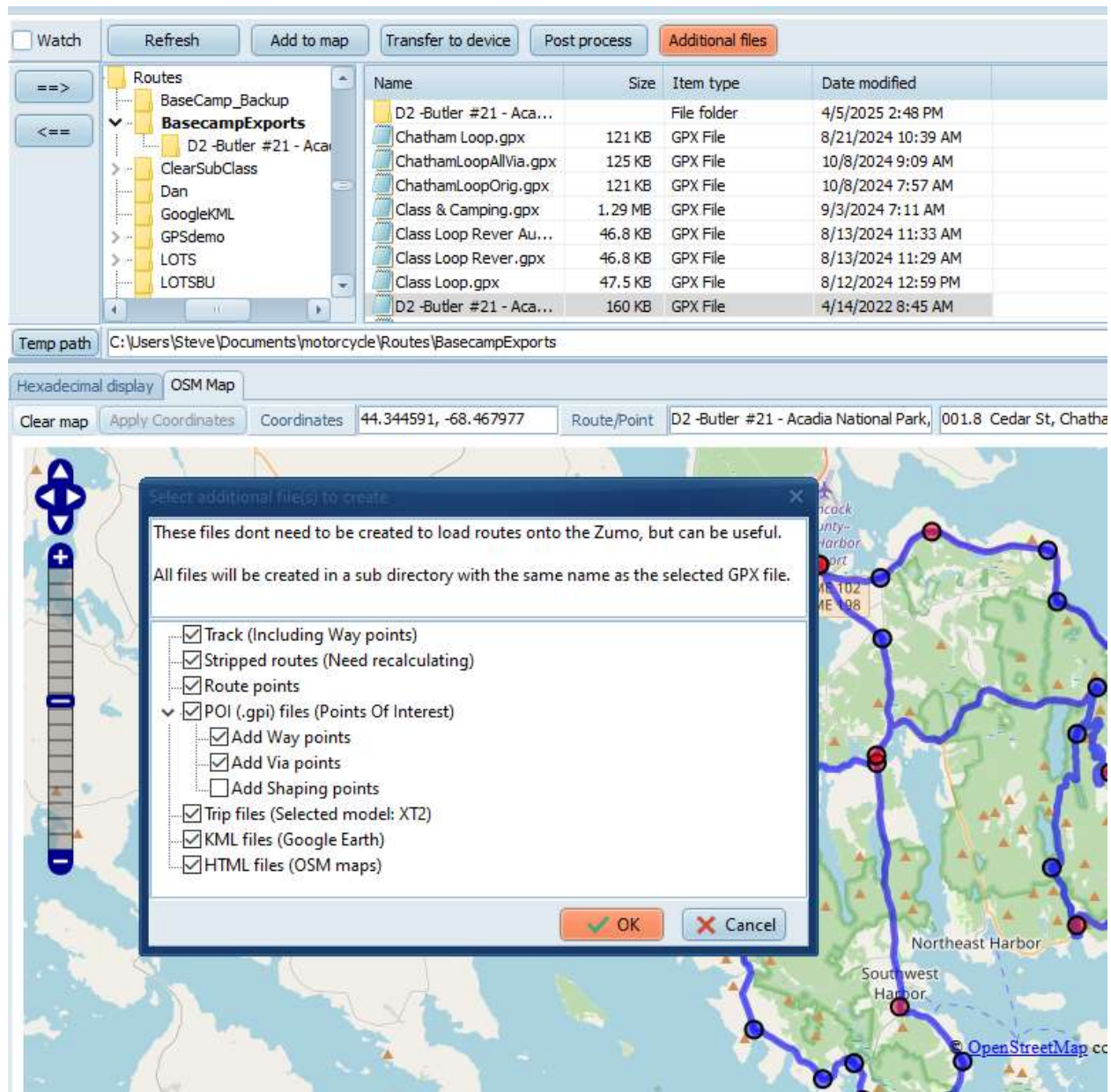
with Tracks:

- It leaves them untouched. Tripmanager wil create tracks automatically when transferred to the XT.

<input checked="" type="checkbox"/> Process Begin points	Begin	Flag, Red
<input checked="" type="checkbox"/> Process End points	End	Flag, Blue
<input checked="" type="checkbox"/> Process Way points	Not renamed	Symbol + GPX filename
<input checked="" type="checkbox"/> Process Shaping points	Route_Distance	Km

Deer Isle
 Northeast Harbor
 Southwest Harbor
 OpenStreetMap

**Additional files:** Trip manager can create a number of additional useful files from the content of a gpx file. The created files are stored on the computer, in a subdirectory created based on the gpx file name. Those files can subsequently be transferred to the zumo, or used with other tools, as desired.



- Tracks have a number of uses including sharing routes with devices not compatible with Garmin style routes in gpx files.
- Stripped routes will contain only the Begin, End, Via and shaping points of the route which will force route recalculation when loaded onto the zumo.
- Route points creates waypoints, in gpx format, from all route points, both via and shaping. This supports navigation to a specific route point (waypoint) directly, without using the route.
- POI creates custom Point of Interest files, in gpi format. Custom POI's, or alerts, popup during travel independent of any route that might currently be navigated. They will be displayed with the icon specified in the original gpx file, e.g. the icon chosen in Basecamp. POI files for various interests are available from a variety of sources. POI files on the computer can be transferred to the zumo using "Transfer to device". zūmo XT(2)\Memory Card\Garmin\POI folder can be a good location to save them.

- Trip files. creates .trip files that can be transferred to and used directly on the zumo. Note that there are differences in trip files for the XT and XT2.

KML and HTML files are not used by the zumo but are useful to other applications.

- KML Files produced here will be usable in Google Earth, and other programs supporting this format such as Maps.Me, Organic Maps or Google Maps.
- HTML Files generated here can be used to share routes with anyone who is able to open a browser.

Note that double-clicking on a KML or HTML the file in Trip Manager will open the file using the associated application on the PC, assuming there is one.

## OSM Map Display

To support convenient data viewing, Trip Manager automatically downloads the appropriate Open Street Maps segments (internet connection required) for selected trips and for gpx file content “Added to map”.

The map view may be zoomed using a mouse wheel or the control at left.

The map view may be panned by dragging with the mouse or using the control at left.

Clicking the “+” at upper right shows a legend.

As noted above, the ability to compare a trip file and corresponding gpx file visually on a map is a significant feature of Trip Manager. The route from a trip file on the zumo is always shown in the color magenta. The display color for routes from gpx files on the computer is selectable.

If route points are displayed without route lines connecting them, the route / trip has not yet been calculated.

**Clear Map:** Clears all currently displayed data from the map. Selecting new trip files and/or the Adding gpx files to map will display data associated with the new selected file(s).

**Coordinates:** Generally, displays the coordinates at the center of the currently displayed map. Alternately, Ctrl + Click will get and show the precise coordinates of the clicked location and will re-center the map on that location.

**Apply Coordinates:** This button provides a means to change the coordinates of (that is move) a via or shaping point. With a trip file selected (upper left display), the mLocations field in the Trip Info display (lower right) includes a list of all via and shaping points. The LCTN of each point includes an mScPosn which includes the coordinates of the point. To change the location:

1. Select the desired LCTN, or its mScPosn in the Trip Info.
2. Ctrl + Click the new desired position on the map.
3. Click Apply Coordinates.
4. Click Save Trip File (From Values) at upper right of the Trip Info section.
5. Click Yes in the dialog box that pops up to acknowledge that the change will require route recalculation on the zumo.

The trip file and the map display will updated with the new location.

Note that the map display will not display route lines until the zumo recalculates the route.

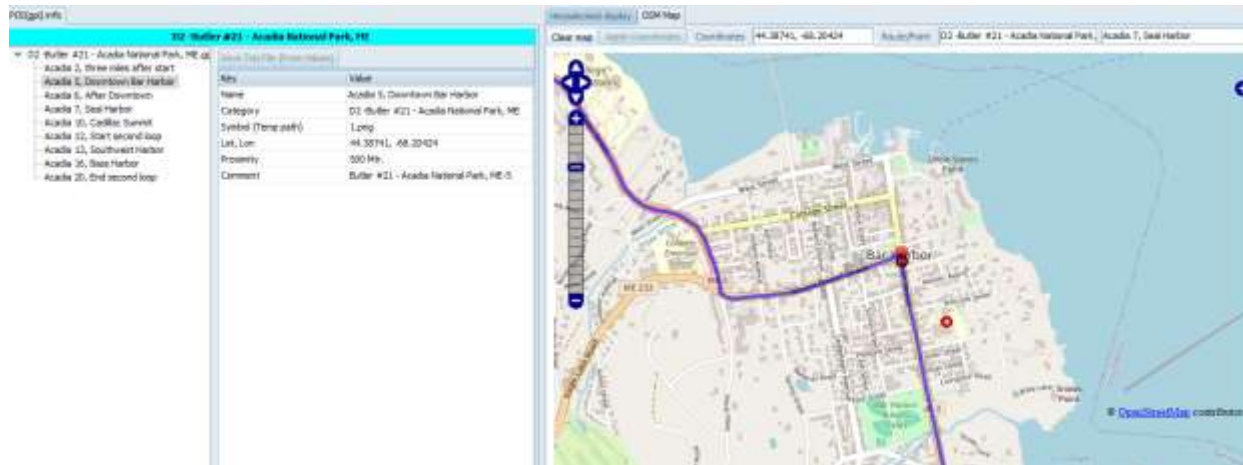
**Route/Point:** Displays the name of the route / route point that the mouse most recently passed over or hovered over.

## Trip Info / Poi(Gpi) Display

The lower left section of Trip Manager’s screen displays the detailed contents of a selected trip or point of interest (gpi) file in the common Key – Value pair format. Files may be selected from either the computer or zumo file system. Files on the zumo will show with a green banner while files on the computer will show with an aqua banner. Selecting



various parameters within the tree and/or key value portion of the Info display will show related information visually on the OSM map, or if selected, the related portion of the hexadecimal display (see below).



In the case of trip files, some fields may be edited and the trip file may be resaved using the “Save Trip File (From Values)” button.

Note that some externally source gpi files may be locked. Those cannot be opened.

## Hexadecimal Display

When viewing trip or gpi file content, the OSM map display can be changed to a Hexadecimal editor for the selected file’s content. Its purpose is to help decode file content. Content can be edited. Hex bytes can be copied with ctrl + c. Character content can be copied with ctrl + shift + c. Trip file content can be resaved with the “Save File (From Hex)” button. Users unfamiliar with the concept of hexadecimal file editing should avoid it. Description and guidance is beyond the scope of this document.

## Appendix

### Repeated U-Turn (RUT)

If, while navigating a planned route, the motorcycle with attached zumo deviates from the route, the zumo will direct the rider to re-join the route. Typically, and logically, this will initially involve a recommended u-turn or series of short turns to get the rider back to the original route. If the rider continues along an alternate path however, it would be expected that the zumo would eventually abandoned the turn-around approach and calculate a new route to the next via point or the destination. The specific behavior will depend on whether the zumo is configured to allow u-turns, allow automatic route re-calculation, etc.

In some cases, the zumo will maintain the u-turn approach much longer than the rider would like or expect. This behavior was coined “RUT” by JFHeath on the Garmin users forum (<https://www.zumouserforums.co.uk/viewforum.php?f=11>). He found that the RUT behavior occurred with routes which were “imported” to the zumo, but not with routes “saved” on the zumo. Trip Manager allows RUT to be avoided by setting routes (trips) to “saved”.

Detailed discussion of the RUT issue can be found here <https://www.zumouserforums.co.uk/viewtopic.php?t=2904> and in several other posts on the zumo user forum.

### Routes, Tracks, Conversions and Transfer Techniques

[This document provides a limited discussion on these topics, with a focus on Trip Manager’s capabilities, which are extensive.]

The zumo XT and XT2 support navigation via tracks, routes, or a combination of the two.

**Tracks** provide a visual representation of a path to be followed. A track will never be recalculated. This can be an advantage since it will never change. It will remain consistent when shared with others regardless their chosen device, map(s) and routing parameter configuration. This can also be a disadvantage since a track can never be recalculated when, for example, a route change is required due to a closed road detour. A track cannot provide turn-by-turn directions or arrival announcements. A track is silent. Tracks are specified with very large numbers of track points.

**Routes:** A route is calculated from a limited number of user specified route points. It can provide spoken turn-by-turn directions and arrival notifications. A route can be recalculated when travel varies from the originally planned route. Recalculation can be an advantage or a disadvantage. (The zumo configuration options include the ability to restrict recalculation for some conditions.) The route calculated will vary depending on the map, the configured routing parameters and the device’s routing engine, among other factors. Different devices or route planning software can produce different routes from the same set of specified route points, although all routes can be expected to pass through all specified points. The greater the number of points specified, the closer varied routing results will be.

It is possible to convert between tracks and routes. There are pros and cons to that as well.

**Transfer Techniques:** There are multiple methods to transfer routes and tracks, as well as additional navigation related data, between a PC and a zumo (as well as other devices). Each has their respective pros and cons. Techniques applicable to the zumo include:

1. Using Basecamp, Explore (XT only), or the Tread phone app (XT2 only).
2. Sending a track to the zumo and converting it to a trip on the zumo.

3. Sending a calculated route to the zumo.
4. Sending a “stripped” (not calculated) route to the zumo.
5. Sending a .trip file directly to the zumo (recommended, when possible).

Number 1 is not discussed further here. Trip Manager supports methods 2 through 5 using “Transfer to device”.

If the original gpx file contains only a track, then Trip Manager can send that track to the zumo for conversion to a trip. That technique, number 2, results in a trip that will not be altered, but has no meaningful via or shaping points. All route points will be random locations selected from the track since there is no other information available.

If the original gpx file contains an already calculated route [which will contain many “hidden” or “ghost” points, that is route point extensions in the gpx file] then Trip Manager can send it to the zumo. Technique number 3 will result in a route on the zumo which does not require recalculation so it will **initially** match the route in the original gpx file. All route points, via and shaping, will be those of the original gpx file and they will not change (unless the Tread App is allowed to sync routes). However, if a route recalculation is later forced on the zumo for any reason, the resulting route (trip) may be quite different from the original.

Technique number 4 can be used if the original gpx contains an uncalculated route. It can also be used if the original gpx file contains a calculated route because Trip Manager can “strip” the route, that is remove the “hidden” or “ghost” points so that only the via and shaping points remain. In this case, the trip(s) will always be recalculated upon importing by the zumo. This means route calculation results from the zumo can be checked and compared to the intended route(s) while comfortably sitting at a PC on a desk, avoiding potential frustrating surprises while traveling.

Most importantly, technique number 5 has the Trip Manager sending a .trip file directly to the zumo. These trips don’t need to be imported. They will be directly available in the trip planner. They are automatically set to ‘saved’, avoiding “RUT”. Routes within the same file gpx are automatically grouped (on the XT). The first time a trip is opened on the zumo, it will be recalculated.

Methods 2 through 5 can be completed using Trip Manager’s, using “Transfer to device”. Starting with gpx files containing only route(s), and optionally waypoints, Trip manager can generate trip files containing the route(s), plus corresponding tracks, waypoints and points of interest. Trip Manger can then transfer the trips directly to the proper default locations on the zumo.

Routes [re]calculated by the zumo should be checked against original routes specified in the original gpx files. Trip Manager makes this easy as discussed in [“Compare trip and gpx”](#).

## Glossary of Terms

GPI	Garmin Point of Interest
GPS	Global Positioning System
GPX	GPS eXchange format
OSM	Open Street Maps
POI	Point Of Interest
RUT	Repeated U-Turns