

GPX_2_KML_4_OruxMaps

Version and Licence

- Version v2.0 dated 11/2024
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Map Icons Collection
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About

This program is used to convert GPX files exported from Garmin Basecamp in one go into a KML file that can be imported by OruxMaps.

Be aware

- Basecamp uses a Garmin implementation of GPX that differs from the standard GPX in aspects like colour. To receive a full set of features, make sure you source your tracks and waypoints from Garmin Basecamp.
- Files converted by this App won't fully support all features of Maps.me and Organic.Maps. They have implemented their own KML structure. See separate program ***GPX_2_KML_4_Orga***
- Even if the App is designed to use Garmin GPX files, it should work with standard GPX files too.

Use:

Planning:

Planning is done in Garmin Basecamp.

- Waypoints shall be named without special characters (ä/ö/ü etc)
- Tracks shall be named without special characters (ä/ö/ü etc)
- Waypoints and Tracks may include a description
- Export data via Basecamp File -> Export function.

Conversion

GPX_2_KML_4_Orux has no user interface. You just take your exported GPX and drag & drop it onto the exe. As a result, you have a converted KML with the same name in the same directory as the GPX. If there are any errors, you will be informed.

Translation Table

GPX2KML uses a translation table to convert Garmin GPX points and track-colours into KML icons and colours. You can change the translation according to your needs.

The translation table is a JSON structure. Make sure you maintain it in a valid format. Before editing its recommended to make a backup first.

Structure example

```
{
  "trackwidth": {
    "Magenta": "10",
    "Cyan": "10",
    "Green": "10",
    "Red": "10",
    "Default": "10"
  },
  "trackcolor": {
    "Magenta": "FFFE01FE",
    "Cyan": "FFFFFFF00",
    "Green": "FF00FF00",
    "Red": "FF0000FF",
    "Default": "FFFE02FE"
  },
  "points": {
    "Default" : "pin-export.png",
    "Gas Station" : "gas-station.png",
    "Information" : "information.png",
    "TracBack Point": "footprint.png",
    "Toll Booth" : "tollstation.png",
    "Ferry" : "cruiseship.png",
  }
}
```

Routes

Since routes do not have reasonable track values, they are not observed.

Tracks (Lines)

The assignment is done via all Garmin colour names for tracks known to me. First the standards, then the coloured dark "colour". The Light "colour" and the gray tones are bridged to black - you hardly can see them on the display. Feel free to change to your needs!

Waypoints

Waypoints will be shown as icons. Based on how KML works, the icons need to come from somewhere in the web. All icons used are addressed to my server <http://motorradtouren.de/pics> so they can be pulled from there.

If you want to change that, change the code. It's easy to find.

If you want to change icons in the translation table, here you can find the icons stored on <http://motorradtouren.de/pics>: <https://mapicons.mapsmarker.com/wp-content/uploads/zip/mapiconscollection-markers.zip>

Defaults:

In the translation table there is a default value for the **tracks** and **points**. This is needed to assign valid values to your new KML while using undescribed colour values and waypoints in the GPX.

Make sure the default is always set!

See example above.

Credits

- To build a running EXE from python source, I'm using the pyinstaller from <https://pyinstaller.org/en/stable/>
- Icons used are licensed under
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Data privacy

- By design XML structures as GPX and KML reach out for external servers. For example, interpreting the Garmin GPX, you will find certain html addresses in the GPX's header that support interpreting the structure.
- Using icons make the KML interpreter (as Oruxmaps) reaching out to my server via <http://motorradtouren.de/pics>
No access data is collected or stored for this service by this program or on the server motorradtouren.de.

ColorTable: Name to Hex

This is not necessarily the list of colours used by me - but you may give it a try!

This is a good site to check your colours: <https://www.color-hex.com/>

aliceblue = 'ffffff8f0'	ghostwhite = 'ffffff8f8'	mistyrose = 'ffe1e4ff'
antiquewhite = 'ffd7ebfa'	gold = 'ff00d7ff'	moccasin = 'ffb5e4ff'
aqua = 'ff00ffff'	goldenrod = 'ff20a5da'	navajowhite = 'ffaddeff'
aquamarine = 'ffd4ff7f'	gray = 'ff808080'	navy = 'ff800000'
azure = 'ffffffff0'	grey = 'ff808080'	oldlace = 'ffe6f5fd'
beige = 'ffdcf5f5'	green = 'ff008000'	olive = 'ff008080'
bisque = 'ffc4e4ff'	greenyellow = 'ff2fffad'	olivedrab = 'ff238e6b'
black = 'ff000000'	honeydew = 'fff0fff0'	orange = 'ff00a5ff'
blanchedalmond = 'ffcdebff'	hotpink = 'ffb469ff'	orangered = 'ff0045ff'
blue = 'ffffff000'	indianred = 'ff5c5ccd'	orchid = 'ffd670da'
blueviolet = 'ffe22b8a'	indigo = 'ff82004b'	palegoldenrod = 'ffaee8ee'
brown = 'ff2a2aa5'	ivory = 'ffff0fff'	palegreen = 'ff98fb98'
burlywood = 'ff87b8de'	khaki = 'ff8ce6f0'	paleturquoise = 'ffeeeeaf'
cadetblue = 'ffa09e5f'	lavender = 'fffae6e6'	palevioletred = 'ff9370d8'
chartreuse = 'ff00ff7f'	lavenderblush = 'fff5f0ff'	papayawhip = 'ffd5efff'
chocolate = 'ff1e69d2'	lawngreen = 'ff00fc7c'	peachpuff = 'ffb9daff'
coral = 'ff507fff'	lemonchiffon = 'ffcdfaff'	peru = 'ff3f85cd'
cornflowerblue = 'ffed9564'	lightblue = 'ffe6d8ad'	pink = 'ffc0c0ff'
cornsilk = 'ffdcf8ff'	lightcoral = 'ff8080f0'	plum = 'ffdda0dd'
crimson = 'ff3c14dc'	lightcyan = 'ffffffe0'	powderblue = 'ffe6e0b0'
cyan = 'ff00ffff'	lightgoldenrodyellow = 'ffd2fafa'	purple = 'ff800080'
darkblue = 'ff8b0000'	lightgray = 'ffd3d3d3'	red = 'ff0000ff'
darkcyan = 'ff8b8b00'	lightgrey = 'ffd3d3d3'	rosybrown = 'ff8f8fbc'
darkgoldenrod = 'ff0b86b8'	lightgreen = 'ff90ee90'	royalblue = 'ffe16941'
darkgray = 'ffa9a9a9'	lightpink = 'ffc1b6ff'	saddlebrown = 'ff13458b'
darkgrey = 'ffa9a9a9'	lightsalmon = 'ff7aa0ff'	salmon = 'ff7280fa'
darkgreen = 'ff006400'	lightseagreen = 'ffaab220'	sandybrown = 'ff60a4f4'
darkkhaki = 'ff6bb7bd'	lightskyblue = 'ffface87'	seagreen = 'ff578b2e'
darkmagenta = 'ff8b008b'	lightslategray = 'ff998877'	seashell = 'ffeed5ff'
darkolivegreen = 'ff2f6b55'	lightslategrey = 'ff998877'	sienna = 'ff2d52a0'
darkorange = 'ff008c00'	lightsteelblue = 'ffdec4b0'	silver = 'ffc0c0c0'
darkorchid = 'ffcc3299'	lightyellow = 'ffe0ffff'	skyblue = 'ffebce87'
darkred = 'ff00008b'	lime = 'ff00ff00'	slateblue = 'ffcd5a6a'
darksalmon = 'ff7a96e9'	limegreen = 'ff32cd32'	slategray = 'ff908070'
darkseagreen = 'ff8fbc8f'	linen = 'ffe6f0fa'	slategrey = 'ff908070'
darkslateblue = 'ff8b3d48'	magenta = 'ffff00ff'	snow = 'ffffafaf'
darkslategray = 'ff4f4f2f'	maroon = 'ff000080'	springgreen = 'ff7fff00'
darkslategrey = 'ff4f4f2f'	mediumaquamarine = 'ffaacd66'	steelblue = 'ffb48246'
darkturquoise = 'ffd1ce00'	mediumblue = 'ffcd0000'	tan = 'ff8cb4d2'
darkviolet = 'ffd30094'	mediumorchid = 'ffd355ba'	teal = 'ff808000'
deeppink = 'ff9314ff'	mediumpurple = 'ff87093'	thistle = 'ffd8b0d8'
deepskyblue = 'ffffbf00'	mediumseagreen = 'ff71b33c'	tomato = 'ffa463ff'
dimgray = 'ff696969'	mediumslateblue = 'fee687b'	turquoise = 'ffd0e040'
dimgrey = 'ff696969'	mediumspringgreen = 'ffa9afa0'	violet = 'fee82ee'
dodgerblue = 'ffff901e'		wheat = 'ffb3def5'
firebrick = 'ff222b2'	mediumturquoise = 'ffccd148'	white = 'ffffffff'
floralwhite = 'fff0faff'	mediumvioletred = 'ff8515c7'	whitesmoke = 'fff5f5f5'
forestgreen = 'ff228b22'	midnightblue = 'ff701919'	yellow = 'ffff00ff'
fuchsia = 'ffff00ff'	mintcream = 'ffffaff5'	yellowgreen = 'ff32cd9a'
gainsboro = 'ffdcddcd'		

Garmin Waypoints

This are the waypoints I'm aware so far:

Airport	Contact, Biker	Kayak	Scales
Alert	Contact, Bug	Letter A, Red	Scenic Area
Amusement Park	Contact, Cat	Letter B, Red	School
Anchor	Contact, Dog	Letter C, Red	Shelter
Animal Tracks	Contact,	Letter D, Red	Shipwreck
ATV	Dreadlocks	Lighthouse	Shopping Center
Ball Park	Contact, Female1	Marina	Short Tower
Bank	Contact, Female2	Man Overboard	Shower
Bar	Contact, Female3	Medical Facility	Ski Resort
Beach	Contact, Goatee	Mine	Skiing Area
Bell	Contact, Kung-Fu	Movie Theater	Skull and
Big Game	Contact, Pig	Museum	Crossbones
Bike Trail	Contact, Pirate	Navaid, Amber	Small Game
Binoculars	Contact, Ranger	Navaid, Black	Snowmobile
Blind	Contact, Smiley	Navaid, Blue	Square, Yellow
Block, Blue	Contact, Spike	Navaid, Green	Stadium
Block, Green	Contact, Sumo	Navaid, Orange	Stop Sign
Block, Red	Contact, Female3	Navaid, Red	Street Intersection
Blood Trail	Controlled Area	Navaid, Violet	Summit
Boat Ramp	Convenience Store	Navaid, White	Swimming Area
Bowling	Cover	Number 1, Blue	Tall Tower
Bridge	Covey	Number, Blue	Telephone
Building	Crossing	Number, Blue	Toll Booth
Buoy, White	Dam	Number 4, Blue	Trail Head
Campground	Danger Area	Oil Field	Tree
Camp Fire	Department Store	Parachute Area	Tree Stand
Canoe	Diver Down Flag	Park	Treed Quarry
Car	Drinking Water	Parking Area	Triangle, Blue
Car Rental	Fast Food	Pharmacy	Triangle, Green
Car Repair	Fishing Area	Picnic Area	Triangle, Red
Cemetery	Fishing Hot Spot	Pin, Blue	Triangle, Yellow
Church	Facility	Pin, Green	Truck
Circle with X	Fitness Center	Pin, Red	Truck Stop
Circle, Blue	Flag, Blue	Pin, Yellow	Tunnel
Circle, Green	Flag, Green	Pizza	Ultralight Area
Circle, Red	Flag, Red	Police Station	Upland Game
City (Large)	Food Source	Post Office	Waterfowl
City (Medium)	Forest	Private Field	Water Source
City (Small)	Furbearer	Radio Beacon	Wind Turbine
Civil	Gas Station	Residence	Wrecker
Contact, Afro	Glider Area	Restaurant	XSki
Contact, Alien	Golf Course	Restricted Area	Zoo
Contact, Ball Cap	Horse Trail	Restroom	
Contact, Big Ears	Hunting	RV Park	