Quick Start - Karttahimmeli

This is a short guide for what to do when an alert comes in and an operation must be started quickly.

For search teams: five actions before field deployment

1. **Open Karttahimmeli** - app or browser at karttahimmeli.fi

2. **Enter operation ID** - get it from command post or QR code

3. **Set team name** according to command instructions

4. **Check battery optimization** - on Android, disable power saving

5. **Do not start** location sharing before name is correct

For command: starting operation

1. **Create operation** by entering new ID (avoid guessable IDs)

2. **Take ownership** immediately via icon next to operation ID

3. **Write ID** or print QR code visibly at command post

4. **Instruct** search team naming before search teams leave

5. **Consider password** if media or outsiders are present

Quick help

Need	Guidance
Cannot join operation	Check ID spelling. Upper/lower case does not matter, spaces do not matter
Map does not move	Center mode is active. Press center button again
Markings not visible	Filter may be active. Check observation log
Location sharing not working	Android: turn off power saving
Map is slow/empty	Browse area to load map cache

Guides in short

- Operations
- Naming conventions
- Maps and navigation
- Location sharing
- Markings
- Areas and plans
- Observation log and filters
- Map printing
- Layers *(advanced)*
- Search planning (MSO) *(for command)*
- GPX files and Replay

Karttahimmeli - Fundamentals

What is Karttahimmeli?

Karttahimmeli is a **map-based situational awareness system** designed especially
for search and rescue operations. The system allows multiple search teams and command staff to share their
location data and add annotations to the same map in real time.

Karttahimmeli is not just a personal map app for one individual. It is a shared tool for the whole organization. Every
annotation is stored in the system for common use.

Why Karttahimmeli?

Before map-based situational awareness systems, sharing location information was slow and error-prone:

- Search Teams had to describe their location verbally over the phone
- Command could misinterpret the location (**confirmation bias**)
- Under fatigue or time pressure, annotations were left unrecorded
- When people left the operation, recorded information was lost

In Karttahimmeli, all annotations are saved automatically in the system, so information is preserved throughout the
operation.

> 🧪 **Why situational awareness matters**
>
> In one search operation, a thermal camera detected a person in covered terrain. Command tried to
> determine by phone which search teams were nearby, and confirmation bias occurred: the detection
> was interpreted as their own search team. It was later discovered that their own search team was 300
> meters away and the detection was the missing person. The search could have ended 12 hours earlier
> if location data had been available in real time.

System structure

Karttahimmeli consists of two basic elements:

1. **Base maps** - shared maps used by everyone for annotations

2. **Operation** - a unique identifier that separates one search from all others

Karttahimmeli can be used both as a mobile app and via browser at
https://karttahimmeli.netlify.app.

> ℹ️ **Remote planning**
>
> Karttahimmeli can also be used remotely from home. Operation planning can start immediately when an alert arrives, even before command has reached the meeting point.

Who is Karttahimmeli for?

- **Search Team members**: making annotations in the field, sharing own location

- **Dog search teams**: following wind data, seeing nearby team locations

- **Command staff**: monitoring situational picture, planning and assigning areas, filtering annotations

Every user benefits from the system, but what matters most is that **the whole organization uses the same operation**.

> ⚠️ **Remember**
>
> Even if your own use of the system does not feel like the most important thing for you personally, your location data can be critically important to a nearby search team, command staff, or for example a helicopter team.

Operations

What is an operation?

In Karttahimmeli, operation is an **identifier** that binds all entries of one search or mission together. It is like a closed "map deck" that all search teams of the same mission join.

Search Teams in different operations do not see each other's entries, even if they use same system.

Operation ID

Operation ID is free-form text used to identify operation. When everyone uses same ID, they see same map with same entries.

Writing operation ID:

- Upper/lower case are **equal** (`SEARCH` = `search`)

- Spaces and punctuation are **ignored** (`Search 1` = `search1`)

- Only letters and numbers are considered

This means ID is interpreted correctly even if written by hand on board or told by phone with minor formatting differences.

> ⚠️ **Choose ID carefully**
>
> Avoid easily guessed IDs such as date or city plus task type (`search-tampere-15-2`). Karttahimmeli has been visible in media, so outsiders may try to guess operation IDs.
>
> Good ID: two random words, or word + non-date number.

Creating an operation

Operation does not need separate setup. Type operation ID in field and join. If operation does not exist yet, it is created automatically.

> ℹ️ **Who can create operation?**
>
> Anyone can create operation by typing ID. There is no strict hierarchy, which enables quick startup.
>
> In real incidents, still check first with command whether operation already exists and what official ID is.

Sharing operation ID

Most common method is writing ID visibly at check-in point. ID can also be shared as:

- **QR code** (printed or shown on screen)
- **Link** (sent by message)
- **Phone call** (dictated)

Because letter case is ignored, dictated ID works even if listener types it with different case style.

> 🔥 **Tip for command staff**
>
> QR code is easy to print to A4: open operation in browser and press Ctrl+P. Printable view includes both text ID and QR code.

Operation ownership

In real operation, command level should take ownership as early as possible. This prevents accidental ownership or password setting by individual searcher.

Benefits of ownership:

- Prevents outsiders from setting operation password

- Allows adding password protection later

- In password-protected operation route history is visible **90 days** back (without password 7 days)

Operation password protection

Password protection is needed if outsiders are suspected in operation. After setting password, already joined users without password are automatically removed from operation.

> ℹ️ **Advanced: ownership**
>
> Operation owner manages operation settings, such as password and other owners. If password is set, only users with password can join.
>
> Ownership is managed via person icon next to operation ID field. Sign-in requires Google account.

> 🔥 **Shared password for trainings**
>
> In association trainings, you can pre-agree one shared password used in all trainings. This makes password protection easy to enable without separate negotiation.

Naming Search Teams and Areas

A good naming convention is one of the most important practices in Karttahimmeli. Search team name is shown in all entries, location history, and filters at command. Without a consistent convention, command post has difficulty understanding situation.

Team ID

Team ID is set when joining operation. Command should define naming convention before search teams start marking or sharing location.

> ## Principles of good team name structure

1. Use descriptive prefix, not single letters

Recommended	Avoid
`Dog01`	`D1`
`Foot03`	`F3`
`Car02`	`C2`

Single letter is ambiguous and may match many unrelated names in search.

2. Use zero-padded numbers

Use `Foot01`, `Foot02` … `Foot10` instead of `Foot1`, `Foot2` … `Foot10`.

3. Separate search team members with slash

If multiple people in same search team use Karttahimmeli, routes get mixed if they have exactly same ID.

Recommendation: add initials or other unique token after slash:

```
Dog03/tk
Dog03/ah
```

Then searching `Dog03` shows all members of that search team.

> ⚠️ **Start only after ID is known**
>
> Do not start markings or location sharing before you know command-approved ID. Wrongly named entries are almost impossible to fix afterwards.

Area naming

Same principles apply to area naming:

- Use zero-padded numbering: `A01` , `A02` not `A1` , `A2`
- In phase naming use two letters rather than one: `phaseAA` , `phaseAB`
- Area name does not need method (e.g. `sweep`), put that in extra info

Extra info for areas

Area extra info can include for example:

- Special terrain notes
- Search Team instructions: *"Start from north, pay special attention to ditches"*
- Search Team after-action comments: *"Area covered, snow to mid-calf"*

> ℹ️ **Remind search team about extra info**
>
> It is good to mention separately to team lead if area has instructions in extra info. Otherwise they may be missed.

Maps and Navigation

Map selection

Karttahimmeli automatically selects the best map for the current zoom level. You do not need to switch maps manually. Zoom in/out is enough.

Zoom level	Automatic map
Wide overview	"Road map"
Working view	Terrain map
Detailed view	Mapant ("ant map")
Full zoom	Aerial imagery

You can also switch maps manually from the map selector on the right side.
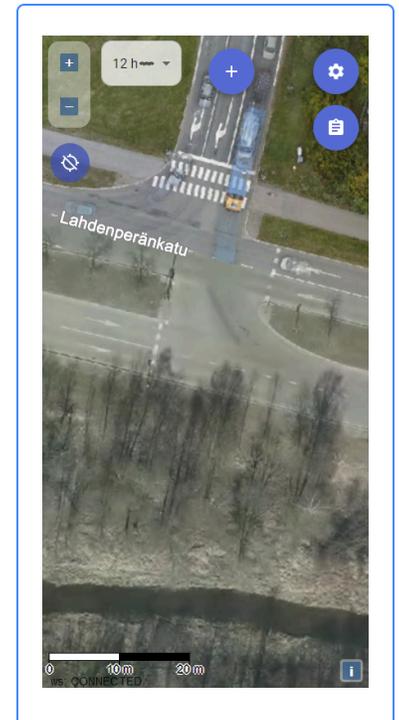
Map options

Terrain map

Standard terrain map. Contour lines were drawn manually for original 1:20,000 scale. At high zoom, no additional detail appears.

Mapant ("ant map")

Green means dense vegetation, orange means open area. Black dots show steep rock or exposed stone.

Mapant is automatically generated from lidar data and resembles orienteering map. It shows terrain forms more accurately than traditional terrain map.

> ℹ️ **Why Mapant is often best**
>
> Mapant contour lines are machine-generated from lidar data, so they often match real terrain forms better than manually drawn terrain map. With Mapant, self-positioning in terrain is often significantly more accurate.

Aerial image

At close zoom, Karttahimmeli automatically switches to aerial imagery. Useful when surroundings need detailed visual check.

Address map

In urban areas address map is often best. Addresses are clear and area layout is easier to understand by streets.

Lightened map

When there are many map entries, map can be lightened so entries stand out. Setting is under map selection menu.

Navigation on map

Panning and zooming

Map is moved by dragging (finger on touch screen, mouse in browser). Zoom with pinch gesture (touch) or mouse wheel.

Map centering modes

Own location display is activated from **own location** switch. When enabled, center button has three modes:

1. **Free mode** (default): map can move freely, own location shown as dot
2. **Center mode**: map follows own location automatically; map cannot pan but can rotate
3. **Navigation mode**: map rotates automatically by travel direction and own location is shown in lower third

> 🔥 **Using navigation mode**
>
> In navigation mode map rotates using compass or GPS heading. When standing still it uses compass, while moving it uses GPS heading. Exit by pressing button third time.
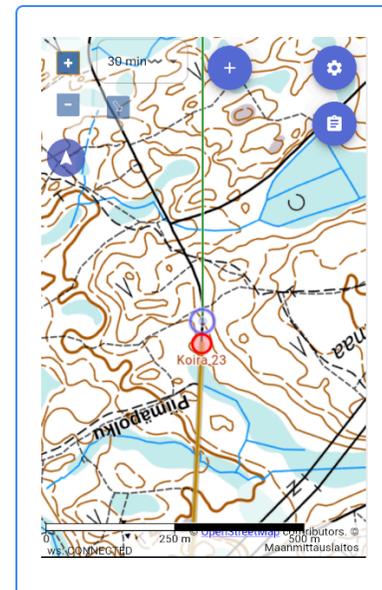
North lines and crosshair

From Preferences menu you can enable:

- **North lines**
- **Compass rose**
- **Scale bar**
- **Wind indicators**

Map cache

If app reports empty cache, browse area calmly before departure.

Karttahimmeli works without network if required map tiles were cached earlier.

Location Sharing

Sharing your own location

Location sharing means others in operation can see your position in real time. It is one of the most important Karttahimmeli features for shared situational awareness.

Location sharing is started from dedicated share button (not from the same switch as own location display).

> ⚠️ **Before starting sharing**
>
> Before enabling sharing, verify team ID follows command naming guidance. Incorrectly named location data significantly complicates command work.

Location trail - tail

Location sharing records your route. On map route is shown as **tail**, a line indicating where you came from.

Tail length can be adjusted in settings:

- **Default: 30 minutes** - often enough for search team work
- **Dog search team recommendation: at least 4 hours** - to notice when you cross old tracks
- **Backtracking: full trail** - set tail long enough to show full route

> ℹ️ **Tail is only a view**
>
> Changing tail length affects only what is **visible on map**. It does not remove stored route history from system.
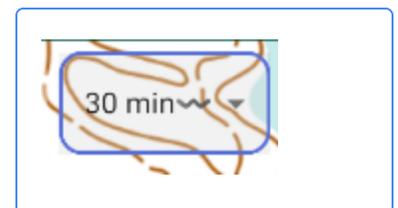
Who should share location?

Multiple people in same search team can share location. In a dog team, it often makes sense that both handler and assistant share.

If two people in same search team use **exactly same ID**, their routes mix. Separate search team members with slash. See naming conventions.

> ℹ️ **Advanced: sharing to a layer**
>
> Location can be shared to separate layer instead of all users. This can be used in training where participants should not see each other's positions. See Layers guide.

Power saving

On Android, power-saving mode can stop location updates when display turns off. Karttahimmeli warns about this with yellow notification.

Power saving must be disabled so background location works when screen is off. Check phone power settings if this fails.

Nearby search teams on map

At wider zoom level you can see other search team positions. Search Team tail shows from which direction they came.

It is not recommended to keep wide zoom all the time because it disrupts your own work. But it is good to occasionally check wider picture, especially before dog team starts a search.

Markings

Why mark observations?

In field, observations should be marked **immediately**, not only after return to command post. Reasons:

- Location is known for sure, later exact place is hard to remember
- Timestamp is stored automatically
- "One person's trash is another person's treasure": low-value observation for one search team may be decisive for another

> 🔥 **Mark boldly**
>
> Do not skip marking because you are unsure of significance. Mark it and set importance to *Trivial*. It stays in system but does not clutter command situational picture.

Creating a new marking

Marking is added with **plus button**, then observation type is selected.

When own location is enabled, marking is automatically placed at GPS location. With gloves, there is no need for precise tapping.
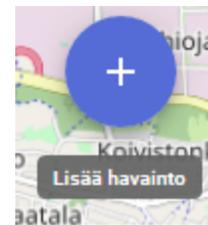
Observation types

Karttahimmeli has six point observation types:

Marking	Use
Person	Observed or suspected person
Item	Found item or track sign
Dog reacts	Dog reaction (including air scent reaction)
Direction	Heard or seen event in specific direction
Command post	Command post location
Other	Everything else

> ℹ️ **Other is most flexible**
>
> In practice, *Other* can be used very broadly. It fits observations that are difficult to classify into other categories.

Marking importance

Each marking can be assigned importance:

Importance	Meaning
Very significant	Call command immediately. Affects search direction.
Normal	Reportable observation; contact command as needed
Trivial	No immediate search impact, but stored

Trivial markings are shown faded on map and do not clutter situational picture, but they stay stored for later review.

> ⚠️ **Very significant = call command**
>
> If you mark observation as very significant, call command immediately. Karttahimmeli entry alone is not enough. Command has other tasks and may not monitor map in real time.

Direction arrow

Direction arrow can be added to observation, for example from where sound came or where track continued. Arrow is added while creating observation.

If phone compass works, you can point phone to direction and save automatically. Otherwise direction is set by dragging arrow from crosshair.
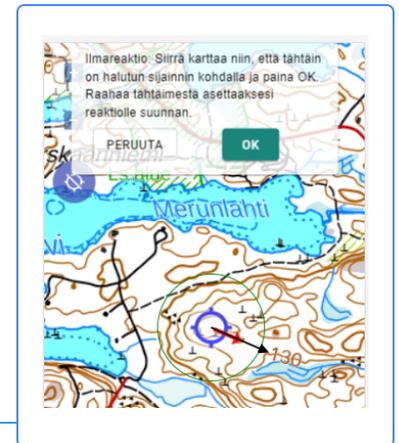
Saving and network connection

> ⚠️ **Offline use**
>
> Karttahimmeli also works without network. Markings are stored locally and sent automatically when connection returns. Do not close app in forest only because network is down.

Marking is first saved locally and sent to server as soon as network is available. Spinning icon on marking means upload is in progress.

Reviewing markings

By tapping a marking you can view:

- Timestamp

- Search team name

- Extra info and comments

- GPS accuracy at marking time

- Wind data from nearest weather stations

Wind data is stored automatically. This is especially useful for dog teams post-analysis.
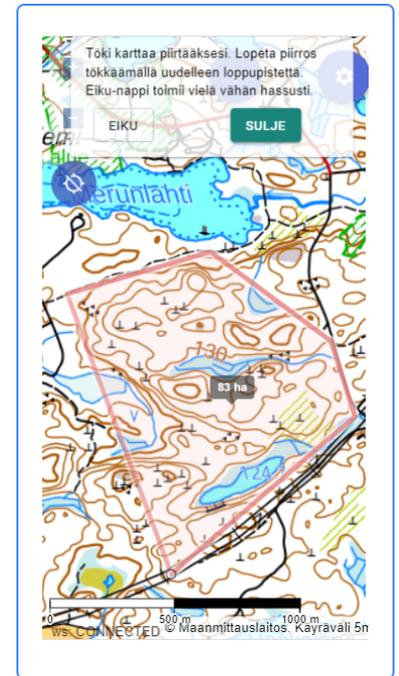
Areas and Plans

Drawing tools

Karttahimmeli has three drawing tools:

Tool	Use
Area	Closed area, e.g. a search sector
Plan (route)	Free-form line or route
Route area	Route with configured width on both sides

Drawing tools are opened from the plus button.

Drawing an area

An area is drawn by tapping desired corner points on the map. Drawing ends by tapping the last point again.

While drawing, area size is shown in real time. This helps estimate how large the planned areas are.

> ⚠️ **Do not draw by contour lines**
>
> Boundaries should follow **visible terrain features**: ditches, valleys, hills, roads, paths, or swamp edges. Contour lines are not visible in the field, so they are not good search-sector boundaries.

Precise drawing with the crosshair

Finger tapping is not always accurate enough. For precision, use the crosshair:

1. Move the crosshair to the desired location

2. Press the plus button

3. Move the crosshair to the next point

4. Press the plus button again

This also allows precise line drawing along a path.

Route area

A route area is drawn like a route, but with a width from the centerline. This is useful for:

- Planning road-side checks for vehicle teams

- Planning dog search patterns

- Creating route-based sweep areas

Drawing on phone

Drawing with fingers can be difficult with gloves. Use the crosshair for precise points, or draw roughly first and refine later.

> **ℹ Route area width**
>
> A good route area width is the searcher's estimated effective search depth to one side of the route. Note that Karttahimmeli does not account for actual road or path width, so add that in the width setting.
>
> Typical values:
>
> - Dog team: 50-100 m
>
> - Foot team ditch check: 20-30 m
>
> - Foot team visual scan: 30-50 m

Extra info for areas

Areas can include:

- **Name** - shown on map as text
- **Extra info** - free text field

Extra info can include at least:

- Instructions to search team (*Start from north*)
- Terrain notes (*Stream crossing difficult, use rocky section*)
- After-action note (*Area covered, no findings, snow to mid-calf*)

> ℹ️ **Remind the search team**
>
> If you wrote important guidance in area extra info, tell the search team separately that extra info exists.

Colors in plans

Routes and plans can use four colors. Colors can be used for example by:

- Different phases
- Different search team type
- Checked vs planned

Editing and deleting areas

Completed areas and plans cannot be edited. If correction is needed, delete and redraw. Redrawing is easier because Karttahimmeli snaps to nearby existing lines.

Deleting an area requires typing team name for confirmation, which helps avoid accidental deletion under time pressure or when wearing gloves.

Navigate to area

Next to area or plan points there is a **route button** that opens Google Maps navigation to that point. Useful when search team needs access to a rendezvous point.
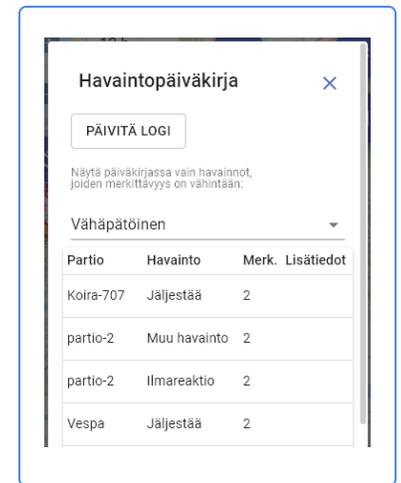
Observation Log and Filters

Observation log

Observation log opens from the **notebook button** on the right side of the map. It lists all operation entries and is especially useful at command post.

Log has four tabs:

Tab	Content
Observations	Point entries
Search Teams	Search Teams sharing location
Areas	Operation areas
Other	Text entries, command post

Clicking any entry moves map automatically to that location.

Filtering observations

Observations can be filtered in several ways.

Search text

A word typed in the search field is matched against all visible fields: team name, extra info, observation type, and time.

Search is **narrowing** (AND type). Multiple words mean all terms must be found. For example `dog` `item` lists only entries containing both words.

> **ℹ Filters affect map**
>
> Filters do not only limit list. They also hide matching items from map. If something seems missing on map, first check whether filter is active. Filter button turns gray when active.

Importance filter

Importance filter can hide trivial entries and show only relevant ones.

Useful at command post: set filter to *Normal* or *Very significant*. Then low-importance entries are removed from map and clutter decreases.

Sorting

List can be sorted for example by:

- Time (newest first or oldest first)
- Search team name alphabetically
- Area size (areas)

Search Team filters

In Search Teams tab you can filter visible search teams by typing start of id. This is especially useful when you want to see only dog search teams.

> ℹ️ **Area search is OR type**
>
> In area and search team search, multiple terms are **combined** (OR type): `dog01 car02` shows both. Observation search is narrowing (AND). `white sock` returns observations containing both words.

Tail length - visible time window

Tail length setting also affects:

- Which search teams appear in Search Teams list (only search teams with location updates inside selected time window)
- Length of downloadable GPX route

On phone: swipe filters

On phone, items can be quickly filtered with swipes:

- **Swipe left** in list -> selected item is shown **alone** on map (others hidden)

- **Swipe right** -> selected item is **hidden** from map

Reset state: tap top bar twice, or swipe left on top bar.

In browser, same behavior is available with right mouse button.

> 🔥 **Tip for dog teams**
>
> Dog teams often work in a relatively small area, so nearby search team markings may not disturb work even without filters. Filters still help when area borders busy road or otherwise shared high-traffic location.

> ℹ️ **Own search team filter**
>
> If map has too many other search team markings and they disturb your work, set your own team ID in filter. Then only your own entries are shown.
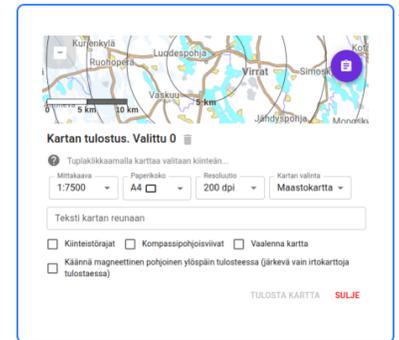>
> Reset filter when you need wider situational view again.

Map Printing

Print tool

Karttahimmeli has built-in print tool that respects active filters. You can print, for example, map showing only selected team areas.

Printing is opened from **map view**: first select desired map and filters, then open print tool.

Selecting print area

Print area is selected from map in two ways:

1. **Single map sheet**: click desired location and print area centers there. Click same location again to remove selection.

2. **Grid**: double-click creates map grid automatically, then expand by clicking neighboring cells. Good for larger command wall map.

> ⚠️ **Grid and north-up orientation**
>
> Grid selection works only when map is in normal (not rotated) orientation. With magnetic-north rotation, grid cells become skewed.

Scale and print settings

Before selecting print area, you can set:

- **Scale** - for example 1:10,000

- **Paper size** - A4, A3, etc.

- **Magnetic north up** - map rotates so magnetic north is at top

Recommended settings for search team map

- **Map**: Mapant or terrain map

- **North lines**: yes (magnetic)

- **Property boundaries**: not recommended (can mislead in terrain)

- **Map lightening**: consider if there are many markings

> ℹ️ **Print at correct scale**
>
> Always print at 100% size, not "fit to page". Many printers default to fit-to-page, which shrinks map and breaks scale.
>
> Top text ("This area is not printed") is only a reminder of printer margins, it does not appear on actual print.

Command wall map

For command post, larger grid map can be printed:

1. Select larger paper size (A3 or multiple A4 sheets)

2. Double-click and expand grid as needed

3. Add comment text (for example command post number or operation ID) which is printed at bottom of map

Printing can be repeated as operation progresses so map reflects latest entries.

Search and addresses in printing

Before printing, verify map is centered to correct location. Address search is behind magnifier button. Enter street address or place name and map moves automatically.

> ℹ **Coordinate search**
>
> Search field also accepts coordinates in multiple formats (WGS84 decimal degrees, degrees and minutes). Karttahimmeli tries to detect format automatically.

Layers

Layers are separate "containers" inside operation where markings, areas, and plans can be stored. By default everything goes to **default layer**, visible to all users.

> ✏️ **Layers are an advanced feature**
>
> Layers are not required in normal search operations. In basic operation, default layer is enough. Consider layers only when basic usage is already familiar.

Why use layers?

Layers allow for example:

- **Planning layer**: command prepares next phase plans in separate password-protected layer. Plans are published to search teams at right time.

- **Training layer**: role players in exercise share location on own layer that participants cannot access.
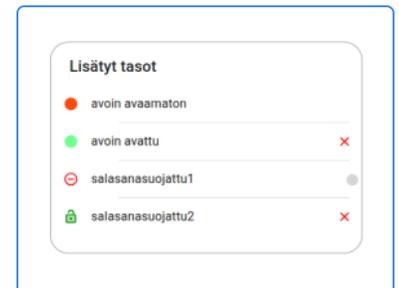
Creating a layer

1. Open Layers menu

2. Enter layer name

3. Set password (or leave empty for open layer)

4. Create layer

> ⚠️ **Creating layer does not activate it automatically**
>
> After creating layer, you must **activate it separately** by entering password again into "Enable layer" field. Otherwise new entries still go to default layer.

Creating entries on a layer

When multiple layers are in use, plus button asks which layer entry is saved to. If you want to save into specific layer, first verify that layer is selected as default for new entries.

> ⚠️ **Location sharing and layers**
>
> When sharing location, check carefully which layer sharing uses. If sharing was started to wrong layer, it cannot be switched live. Stop sharing and start again on correct layer.

Password-protected layer

In password-protected layer, entries and locations are visible only to users with password. User without password sees layer name but not contents.

Password-protected content is shown on map with **orange border**.

Open layers

Anyone in operation can join open layer (no password) by submitting empty password. This opens all open layers at once. Open layers can be used to separate search team plans without secrecy.

Hiding layers

Layers can be hidden or shown one by one from list. Hiding is useful when map becomes cluttered with content from many layers.

> 🔥 **Training scenario with layers**
>
> Training organizer can create secret planning layer for exercise tasks or scenario items to be found. Participants see only default layer, so scenario stays hidden until organizer decides to reveal it.

Search Planning (MSO)

Planning point

Any point marked in Karttahimmeli can be turned into an **MSO planning point** (Managing Search Operations) by setting importance to *Very significant* and selecting *MSO start point* from the importance menu.

Typical MSO points:

- Missing person's **point last seen** or last confirmed observation point
- **Found item** that indicates movement of the missing person

Planning points can also be used in parallel. For example, if missing car is found farther away, two parallel scenarios can be created.

Search probability rings

A **profile** can be selected for planning point, for example *Autistic child*, *Dementia*, *Young adult*, or similar. The profile draws probability rings on map to show where the missing person is most likely to be.

Profiles provide a **directional search area**, not an absolute answer. In real operations, conditions, local knowledge, and new observations can shift focus.

Close Search: 300-Meter Circle

28 hectares is the area of a 300 meter radius circle. Close search should not be underestimated:

- Area can keep three dog teams occupied for hours
- Most findings in all profiles happen at short distance
- Close search should be done first before expanding

> ℹ **How to interpret profiles**
>
> Profiles are based on statistics from earlier search operations. They show how far from the point last seen people with a similar profile have been found, by percentage.
>
> Example: *50%* means half of similar cases were found within 400 meters.

> ⚠ **Close search is critical**
>
> A common mistake is to expand immediately because people think close area is "already checked". 28 hectares is large. Thorough coverage needs several search teams and several hours.

Sectoring

Close search area should be split into sectors and each search team gets its own sector. This gives:

- Area can be covered in 30-45 minutes with multiple search teams

- Command gets time to organize during sectoring

- Results accumulate clearly on map

Sector naming follows same rules as other areas. See naming conventions.
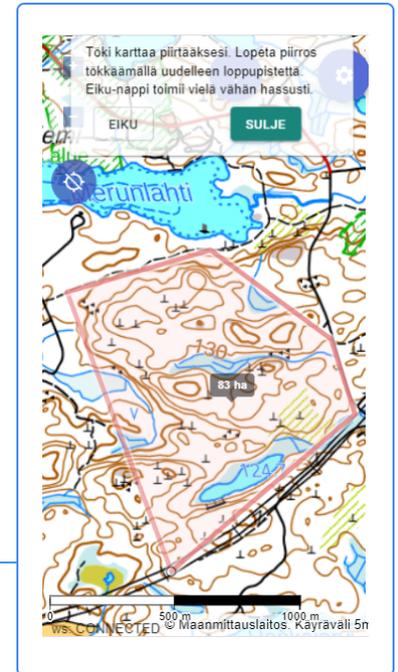
Shifting focus

If new information appears during search (item, observation, or tip call), focus shift may be considered. Before shifting:

1. Evaluate how **reliable** new info is (fact or suspicion)

2. Do not discard existing plan based on first tip

3. Consider opening parallel scenario with separate MSO point

> ✏️ **Confirmation bias in search**
>
> Humans naturally seek data that confirms existing assumptions. Karttahimmeli helps keep location data factual. Do not interpret map as "target is probably there". Keep open view on data.

Expanding area size

When search radius is doubled, area quadruples:

Radius	Area	Required resources (relative)
300 m	~28 ha	1x
600 m	~113 ha	4x
1200 m	~450 ha	16x

For this reason: close search first. At the start, resources should be focused on the most probable area.

MSO info in area names

Search method does not need to be in area name. Put it in extra info instead. Method in name makes names long and harder to search.

GPX Files and Replay

GPX export

Routes, areas, and plans in Karttahimmeli can be exported in GPX format for sharing or archiving.

Exporting a single item

Open desired map item (route, area, or plan) by clicking it on map. In item details there is **download GPX** button.

On phone, GPX can be sent directly using WhatsApp, email, or another app.

> ℹ️ **Tail length affects GPX**
>
> When exporting a route, GPX includes only coordinates visible with the current tail setting. If you want the full route, first set the tail long enough and make sure whole route is visible before export.

GPX import

GPX files can be imported into Karttahimmeli in two ways:

In browser

1. Select any drawing tool (area, route, or plan, any is fine)
2. Press **up arrow** button
3. Select file to import
4. Select how file is stored (as route, area, or plan)

> On phone

Open the file from your device file manager or receive it from a messaging app. Device asks which app should open file. Choose Karttahimmeli.

> ⚠️ **Android: default app**
>
> If another app has been set as default for GPX files, Karttahimmeli may not appear in choices. Clear defaults in phone settings (Apps -> selected app -> Default settings -> Clear defaults).

Moving route between operations

GPX can also be used to move route from one operation to another:

1. Export route as GPX
2. Switch operation
3. Import GPX into new operation

Replay - reviewing situation afterwards

Replay is available in tail menu. It replays operation history over time.

Replay settings:

- **Tail length**: visible tail length at each animation moment
- **Speed**: how quickly time advances
- **Follow search team**: map automatically follows selected search team
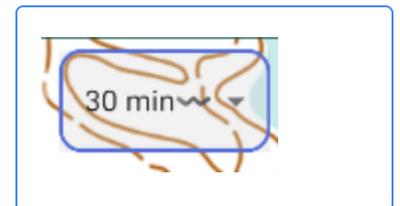
Replay is available within operation data retention window. Older data stays visible as long as operation route history is still available.

Usage examples

Dog training planning

1. Draw track with own team ID (e.g. `jalki01`)

2. Mark items as observations

3. Turn sharing off (or do not share location at all)

4. Another search team (`ajaja01`) joins training

5. Driver search team filters out `jalki01` markings and runs the track

With long tail, whole route can be reviewed without pre-knowing where it goes.

Reviewing route history later

Operation owner does not need to monitor map in real time. All route data is stored for later viewing. Tail setting at review time defines how long route segment is shown.