

Complete guide to Rilievo

Installation use and Codex Cloud

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App Store name: Rilievo RAVENG. In the app, the product is called Rilievo.

The guide explains installation, field work, AI choices, cloud setup, verification and export. Public Apple availability and provider access must be checked separately.

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Installation, your first survey and Codex Cloud setup. Version 1, 9 October 2026.

The Apple listing is named "Rilievo RAVENG"; within the app the product is called Rilievo. This guide takes you from the first launch to a survey package you can review and deliver. Follow the chapters in order for initial setup; later, open the chapter you need. Quoted names refer to buttons or pages in the app. Rilievo collects evidence and prepares drafts. A competent technician checks photographs, data, standards, risks and conclusions before using the output professionally.

1. Before you start

You need an iPhone running iOS 17 or later, free storage for photographs and documents, and an Apple account for purchases. Local AI models have additional requirements: the compatibility shown in the app takes precedence over the iOS requirement alone. MLX models do not run in the simulator. Cloud use also requires internet, an authorised GitHub account and a ChatGPT account with actual access to the Codex feature you will use.

The planned Rilievo subscription for the Italian App Store is €29.90 per month or €299.00 per year, with no free trial. Apple's purchase confirmation shows the applicable price and conditions. Rilievo does not purchase a ChatGPT plan for you and does not include unlimited OpenAI capacity, GitHub storage or a professional assessment of a machine.

Before a real assignment, complete chapter 13 using demonstration equipment and non-confidential material. Charge the phone and bring additional power. Do not approach or photograph moving machine parts without the site's required safe procedure.

2. Install and open the app

1. Open the official Rilievo link on the RAVENG website when Apple distribution is active. Check the app name and developer. If no link is present, public availability has not yet been confirmed; contact support rather than downloading a package from an unrelated website.
2. In the App Store, tap the download button and follow Apple's confirmation steps.
3. Wait for "Open" and tap it. An icon or introductory screen does not demonstrate that the cloud services are configured.
4. For an authorised beta, install TestFlight from the App Store, open the RAVENG invitation and tap "Install". A beta may expire or change. Test purchases do not prove a production purchase.
5. For App Store updates, open your App Store profile and check for updates. Export important surveys before an update, phone replacement or reinstall.

If installation rejects the device, check iOS under iPhone Settings > General > About. Do not change security settings to bypass compatibility.

3. Language and initial settings

1. Open "Settings" from the survey list.
2. Open "Language". "Automatic" uses Italian when the device is set to Italian, and English otherwise. You can select "Italiano" or "English" directly.
3. Enter your name in the inspector field. Check it before each report: an entered name is not a signature or RAVENG approval.
4. Review image quality and arrow preferences. Low resolution may hide plate text and small details. Cloud copies may be resized while export retains originals present in the archive.
5. Choose the AI engine using chapter 5. The interface and new AI output use the app language; customer names, entered data and historical responses are not automatically turned into approved translations.

4. iPhone permissions explained

Request	Purpose	If you decline
Camera	Photographs and document scanner	Import existing files where available
Location while using the app	Suggested customer, address and coordinates	Enter the customer and check the address yourself
Microphone and speech recognition	Dictate names and notes on supported devices	Use the keyboard
Selected photos	Import from the photo library	Capture within the app or import from Files
Notifications	AI alerts and requests	Read the "Alerts" tab

If you declined a permission, open the Rilievo page in iPhone Settings, or Privacy & Security, and change that specific permission. Paths vary with iOS. Dictation requires on-device speech recognition; if the device or language cannot provide it, use the keyboard. MapKit, model downloads, purchases, files selected from iCloud and sharing may separately use external services. "Local AI" identifies where model inference runs, not whether every phone feature is offline.

5. Choose local AI or cloud

Choice	Preparation	Survey material
Local AI	Downloaded compatible model or available Apple feature	Processed by the model on the iPhone; check maps, backups and sharing separately
Codex Cloud	Private repository, token, Codex connection, environment and a successful full test	Uploaded to GitHub and accessible to OpenAI, without automatic anonymisation

If your customer's agreement prohibits cloud processing or you have not established a lawful basis for personal data, leave cloud disabled. Acknowledgement in the app records your choice to activate this route. It does not replace customer permission, a processing agreement or information to people in photographs.

For local use, open Settings > AI engine > Local AI > Local models. Read "Your device". Choose a vision-capable compatible model for photographs. Tap "Download", preferably on Wi-Fi, and wait until it is ready. Tap "Use this" if it is not active. Do not leave for a survey relying on an unfinished download. Model weights come from Hugging Face: downloading contacts an external service but does not require survey photographs to be sent there. Models may occupy several GB, and available memory affects stability.

6. GitHub without programming knowledge

GitHub is the cloud store. A "repository" is a work folder with history. A "branch" is a separate version of that folder. A "pull request", or "PR", is the page containing a work request and its responses. A "token" is a credential allowing the app to operate on the store; treat it like a password.

1. In a computer browser, open github.com, create or use your account and verify the email address. Follow your organisation's account protection rules.
2. Create a new repository with a recognisable name, such as *rilievo-sopralluoghi*.
3. Select Private, not Public. Add an initial README so a default branch exists. Confirm creation.
4. Note the owner, such as *technical-company*, and repository name separately. Do not paste the full web address into the app's Repository field.
5. Check who has access. Private repositories are still accessible to authorised collaborators, administrators and integrations.

Create the repository in the browser first, then restrict the token to that repository. The app's "Create private repository" button may require additional permissions and cannot override an organisation's denied access.

6.1 Create a restricted token

1. On GitHub, open your profile > Settings > Developer settings > Personal access tokens > Fine-grained tokens > Generate new token.
2. Name it, for example "Rilievo iPhone". Select an expiry compatible with company policy and record that date.
3. Under Resource owner, choose the repository's owner.
4. Under Repository access, choose Only select repositories and select the survey repository alone.
5. Set Contents and Pull requests to Read and write. Metadata remains Read-only. To create job labels, also grant Issues Read and write for this repository only; label operations need this permission. Do not grant all-repository access or administrative permissions to work around an error.
6. Generate the token and copy it directly into the app's secure field. Do not put it in photographs, notes, prompts, email, screenshots or shared documents. Revoke and replace a token exposed in an unauthorised location.
7. If your organisation requires approval or SSO, complete that step with its administrator. A pending token cannot read the private repository.

See GitHub's token guide (<https://docs.github.com/en/authentication/keeping-your-account-and-data-secure/managing-your-personal-access-tokens>) and the REST permissions reference (<https://docs.github.com/en/rest/authentication/permissions-required-for-fine-grained-personal-access-tokens>) for the procedure and minimum access principle.

6.2 Connect Rilievo to the repository

1. Open Settings > AI engine > Codex Cloud. Read the disclosure before activating the channel.
2. Open the GitHub/Codex connection and enter Owner and Repository.
3. Paste the token into GitHub token and tap "Save and verify".
4. Wait for the result. It must identify the expected account and repository. If it fails, use chapter 14 before sending photographs.
5. Tap "Publish instructions for Codex (AGENTS.md)". This writes instructions, JSON schemas and prompts to the dedicated repository. Do not use a repository containing unrelated work.

6. Open GitHub in the browser and confirm the repository remains private and contains AGENTS.md and the _ai folder.

7. Configure Codex Cloud once

Use a desktop browser or desktop app for this part. OpenAI's interface may change; follow the names actually displayed and the official linked pages. Current GitHub integrations may use legacy environments, distinct from the newer cloud experience with a published environment. Published status in one route does not prove that the PR integration is configured in the other.

1. Sign in to ChatGPT with the account that will use Codex. Check that your plan and settings provide the relevant cloud feature and GitHub integration. Usage limits, credits, account permissions or company restrictions may apply.

2. Connect GitHub when prompted and select only the survey repository. The iPhone token and Codex's GitHub connection are separate authorisations; both are needed.

3. Open the Codex settings for GitHub integrations. Confirm repository access and an available associated environment. For the legacy route use legacy environments (<https://learn.chatgpt.com/docs/environments/cloud-environment>). Automatic code reviews do not constitute machine inspections.

4. If the interface requires a new environment in the current experience, choose Work in > Cloud > Select environment > Create environment. Select the repository, complete Get started, review access and checks, select Publish and wait for Environment published. See Codex Cloud setup (<https://learn.chatgpt.com/docs/cloud>). The PR integration still needs the test in chapter 8.

5. To research manuals, configure environment network access for the necessary domains under company policy. Do not disable security controls, sandboxing or approvals to bypass a restriction. Without network access, research may remain incomplete; supplied material can still be analysed when the task is authorised.

6. Return to Rilievo. Set job launch to "Comment @codex on the PR" and leave @codex as the mention unless you have verified a different account configuration.

An @codex comment requesting something other than review can start a legacy task with the PR as context, as described in Codex's GitHub integration (<https://learn.chatgpt.com/docs/third-party/github>). This does not guarantee turnaround time, task capacity or valid Rilievo JSON; a practical test is essential.

"PR only" prepares requests but needs your separately configured and verified automation. "Manual" requires you to start work in the cloud account. Neither option creates an

autonomous service by itself. Do not enter OpenAI API keys into this app: this channel uses Codex/GitHub accounts, not a direct OpenAI API integration.

8. First cloud test

1. Create a survey named "TEST without customer data". Use a neutral photograph of demonstration equipment, without people, personal identifiers or confidential information.
2. Add an arrow and a short note. Tap "Done". Open the survey control panel and "Sync now".
3. In "Codex", open the job. A PR must appear in the expected repository. "PR opened" means sent, not analysis completed.
4. Open the PR and check the app's request, the @codex comment and a response or linked task. A bot reaction means receipt, not completion.
5. Wait for output. The expected format is JSON matching _ai/response.schema.json, with the correct job identity and kind. The app can import a JSON comment or the response files supported by its protocol.
6. Return to the app and sync. The assessment must refer to the correct photograph. Check the machine, photograph and arrow, rather than relying on a green indicator.
7. Export the package, open it and check the photograph and response are included. The test is complete only after submission, processing, import and content verification succeed.

If it does not complete, record the PR number and exact message. You can keep collecting evidence and use a compatible local engine, but do not consider cloud ready for customer assignments.

9. Start a survey and collect photographs

1. Tap "New survey" and allow location to resolve if authorised.
2. Check the suggested customer before selecting it. Alternatively, type or dictate the name. Verify the address and inspector.
3. Tap "Start survey". The survey receives a code, date and time. Do not change the phone clock to alter the work date.
4. Before capture, check the machine code in the lower strip. The first photograph may create M01 automatically. Subsequent photographs go to the current machine until you change it.

5. Capture a general view, then details. For another machine, tap "+ Machine" or its code. A submachine records a component or related machine; grouping does not automatically determine the legal boundary of an assembly of machinery.

6. Use the library button for existing photographs. Do not present an older photograph as evidence of a current condition without explaining that limitation.

Coverage includes the plate, general view, controls, emergency stop, electrical cabinet, guards, hazardous areas, access, signs and documents. The dots show recognised categories, not the completeness of a regulatory assessment.

9.1 Arrows and notes

1. After capture, drag from the arrow tail to its tip. Use two fingers to zoom.

2. Use red for a major issue you identify, yellow for a minor or uncertain issue, and green for a detail you consider satisfactory. Colour records the operator's observation; it is not certification.

3. Tap an arrow to edit, move or remove it. Check that the tip points to the right part.

4. Add a note with the microphone or keyboard. Be specific: "M01, rear side, unguarded access to transmission". Stop dictation and reread it.

5. Tap "Done" to save and return to the camera. Processing may be queued; if iOS suspends the app, reopen it and sync.

9.2 Plates and documents

Select "CE plate", avoid reflections, fill the frame and capture. Compare extracted manufacturer, model, serial number and year with the photograph. OCR or provisional readings may be wrong. A missing or unreadable plate remains missing evidence.

For documents, choose "Document" and the multipage scanner. Check the edges and readability of every page and save the PDF to the correct machine. You can also import from Files. Check online manuals against manufacturer, model, revision and language. Finding a document online does not establish its original delivery or the machine's compliance.

10. Understand assessments and alerts

"Machines" contains the inventory, photographs, plates, documents and risks. "Assessments" shows progress and output. "Codex" contains cloud job conversations and local status. "Alerts" contains requests and observations.

"Pending" is neither failed nor completed. "Running" means processing continues. "Error" requires reading the message. "Completed" means a response was acquired, not that its content is correct. No alerts does not mean no hazards.

Open each alert, check machine and photograph, and use "Capture now" or "Open photo" when requested. Mark "Resolved" after documenting why. "Reassess" requests a new reading of open alerts and does not replace a technician's check. "Delete" removes an entry; it does not repair a machine. Avoid bulk actions without reviewing the individual cases.

"Presumed compliance" limits the AI's requests for evidence. It does not prove compliance or remove the need for checks. $R = P \times G$ helps order priorities using the selected criteria; a competent person must verify values and corrective measures.

11. Report and delivery package

1. Open the survey control panel using the sliders icon.
2. Check unassessed photographs, unverified plates, missing risk assessments and open alerts. Do not conceal gaps to obtain a report without warnings.
3. Tap "Final report", or "Close survey" and confirm the request. Wait for the response, then check customer, dates, machines, sources, priorities and conclusions.
4. To add evidence, use "Reopen survey" and request an updated report. Retain any revision already delivered.
5. Tap "Export package". In the share sheet choose "Save to Files" and an authorised folder. Review before sending it to a recipient.
6. Open the saved ZIP. Check `sopralluogo.json`, `README.md`, machine folders, original photographs, annotated copies, documents and `_jobs` with available JSON/Markdown responses. Unfinished responses may be absent. If an expected file is missing, retain the app archive and resolve the issue before delivery.

In the package, "original" means the file retained by the app, not necessarily the camera sensor's native file. Capture is saved as JPEG, resized according to settings with a default maximum edge of 3200 pixels and compression quality 0.86. Retain source files separately when native images or other formats must be preserved. Cloud can use a further resized copy. Export reports an error when required photographs, documents or annotated copies are missing; resolve the gap before delivery.

The package is not a certified PDF or Word report, sworn appraisal, professional signature or automatic declaration of conformity. Renaming Markdown to PDF does not convert it. Use your office's document tools to lay out and approve a final report, retaining its linked evidence.

12. Backups, deletion and phone replacement

Export every important survey, verify the ZIP and retain at least two copies in authorised locations. GitHub does not replace verification of originals; cloud photographs may be resized. Restoring Apple purchases restores available entitlements, not surveys. This version does not promise automatic import of ZIP packages into the app archive.

Export and check before deleting a machine or survey. Deleting in the app does not remove GitHub files, historical commits, PRs, cloud chats, exports or backups. Apply your organisation's and providers' retention/deletion procedures to material already sent. Never give support your credentials.

When replacing an iPhone, check the device backup with Apple's tools and retain the ZIP packages too. Install Rilievo on the new phone, restore purchases with the same Apple account and verify the archive before retiring the old device. You may need to enter the token again; do not assume every preference has migrated.

13. Full rehearsal before a customer assignment

Use demonstration material to create a TEST survey, M01 and M02. Capture a general view, a plate and a document; add an arrow and note; switch machines and verify associations; complete at least one job with the selected engine; open its alert or result; request a report; export and open the ZIP. Repeat in Italian if you will use it. You have finished when both machines' evidence and the correct output are in the package, and you can retrieve them without the app.

14. Common problems and orderly fixes

Symptom	Check	Action
GitHub 401	Incorrect, expired or revoked token	Create a restricted replacement, save and verify
GitHub/Cloud 403	Permissions, organisation approval, SSO, policy, limits or service	Read the message and identify the service; involve the administrator if needed
Repository 404	Wrong owner/name or denied private access	Check both fields and repository selection in the token
PR opened but no bot	Codex repository connection, integration/environment and account limits	Open PR and Codex settings; manually run an authorised test

Symptom	Check	Action
Environment unavailable	New and legacy routes differ; account access	Check the GitHub integration's route and environment state
Codex responded but app still waits	Missing, truncated or wrong-job JSON	Open conversation and request the expected format without duplicate jobs
Manual research returns nothing	Environment network or unpublished document	Obtain the manual from customer/manufacturer; keep the gap explicit
Local model does not start	Device, memory, storage, model and download	Choose a compatible model; finish download; reopen after saving
No notifications	iOS permission and app preference	Enable that permission or read "Alerts"
Evidence associated with wrong machine	Machine selected before capture	Correct before requesting fresh results and check associations
Purchase unavailable	Store status, network, Apple account and products	Try restoring; do not buy a second plan to unlock the first
Archive cannot open	Local storage or migration error	Retain device and backup, contact support and do not uninstall

Do not repeatedly tap "Retry": cloud requests and follow-ups can consume service limits. Error-free sync does not demonstrate that a model completed the job.

15. Subscription and support

To buy, select the period, review price and renewal in Apple's sheet, then confirm with your account. Use "Restore purchases" with the same Apple account to recover a purchase. Manage or cancel under iPhone Settings > your name > Subscriptions > Rilievo, following Apple's screen. Uninstalling does not cancel a subscription. Apple's expiry date and status apply. See Apple's subscription management guide (<https://support.apple.com/guide/iphone/see-your-purchases-and-subscriptions-iph4e3e7324f/27/ios/27>).

Refund requests for Apple purchases follow Apple's process and applicable rights; cancellation does not automatically mean a refund. Keep verified copies of your work before expiry or changing plans. Existing saved surveys remain readable and exportable without an active Rilievo subscription; new capture, editing and AI processing require a verified active entitlement.

Email info@raveng.it with app and iOS versions, iPhone model, language, AI engine, the failing step and exact message. For cloud issues include only the PR number and status, omitting

tokens, customer photographs and confidential files. If assignment data is needed, first agree on a channel and authorisation. Privacy enquiries: privacy@raveng.it.

16. Field reminder

Before: charged phone, ready model or successful cloud test, permissions, authorised assignment and cloud use. During: correct customer, machine code before every photograph, precise arrows, reread notes, checked plates and reviewed alerts. After: checked output, explicit gaps, reviewed report, opened ZIP and two retained copies. The technician decides the final outcome.