

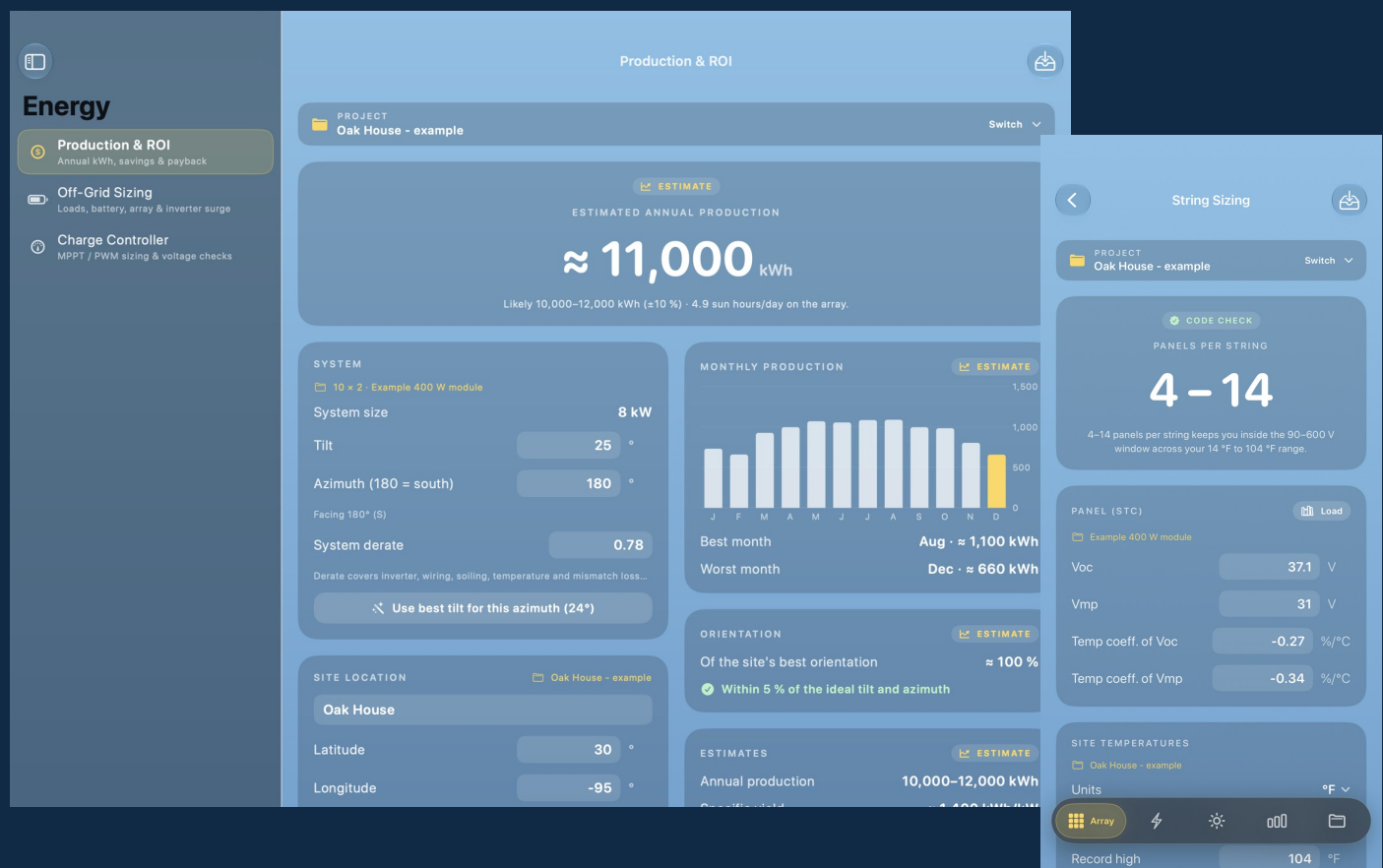


SUN SIZER PRO

iPhone · iPad · Mac

User manual

From site measurements to a clear report.



Detailed workflows · All 18 destinations · Illustrated camera techniques

Version 1.1 guide / October 2026

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Find your workflow

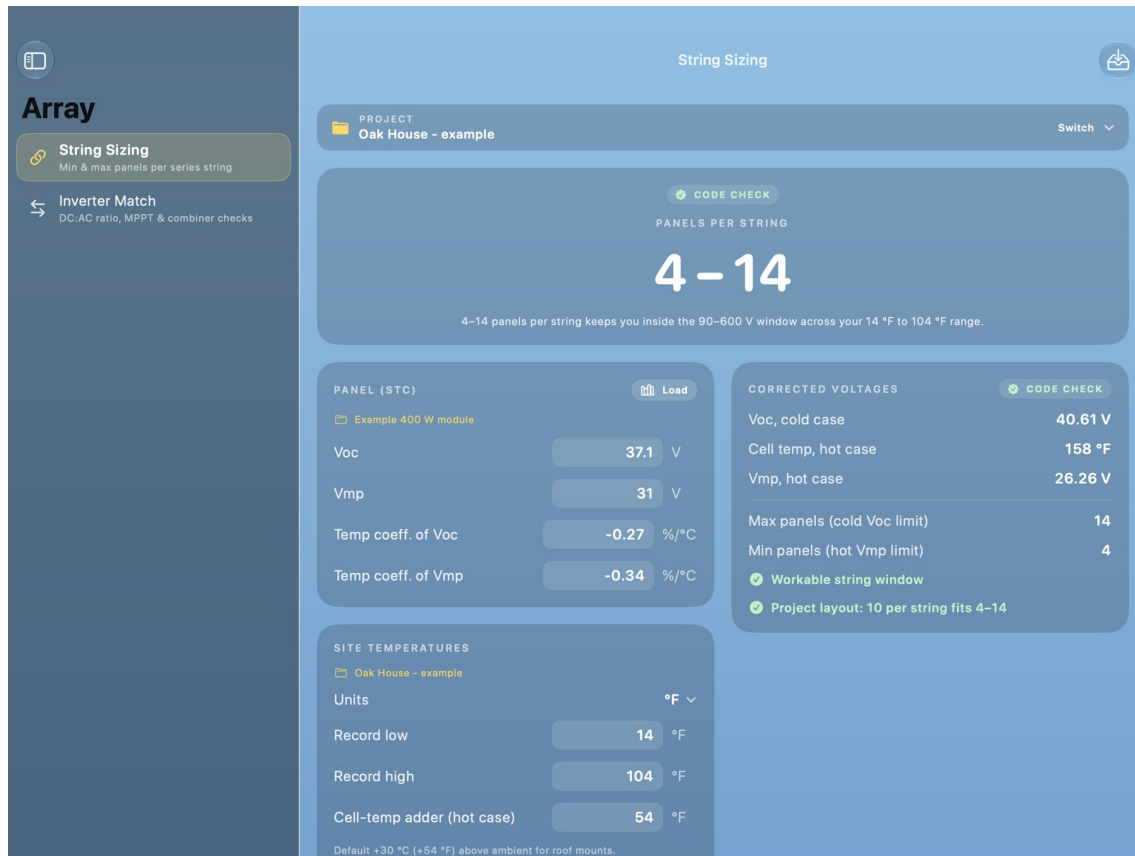
Start with project setup, or jump directly to a tool. Page numbers are clickable; PDF bookmarks provide the same navigation.

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How to read the guide: numbered steps describe app actions. Screenshots show sample inputs. Camera scene illustrations are labeled mockups and are separate from captured app screens.

GETTING STARTED

One app, three workspaces



Mac · Actual app view with fictional project data.

iPhone: work at the site

Use the five tabs along the bottom: Array, Wiring, Site & Sun, Energy and Workflow. Tap a category, then a tool. Tap the selected tab again to return to its tool list.

iPad: see more at once

On a wide layout, the app uses a sidebar and a tool list. The sidebar button reveals navigation when it is collapsed. Inputs and results can sit side by side. A narrow window may use the compact layout.

Mac: finish at your desk

Choose tools from the sidebar or Tools menu. Resize the window to give calculations more room. Camera and motion measurements use typed values on Mac; measurements saved on a mobile device can arrive through the project.

All screenshots use fictional sample data. Device layout and visible controls depend on window size and hardware.

WORKFLOW > PROJECTS

Your first project

Before you begin

Have the panel and inverter datasheets, site location, design temperatures and a proposed layout available. Add battery specifications if the job includes storage.

1 Create and name

Open Workflow > Projects and tap +. Give the project a recognizable job name. New projects become active, linking the calculators to that project.

2 Complete setup

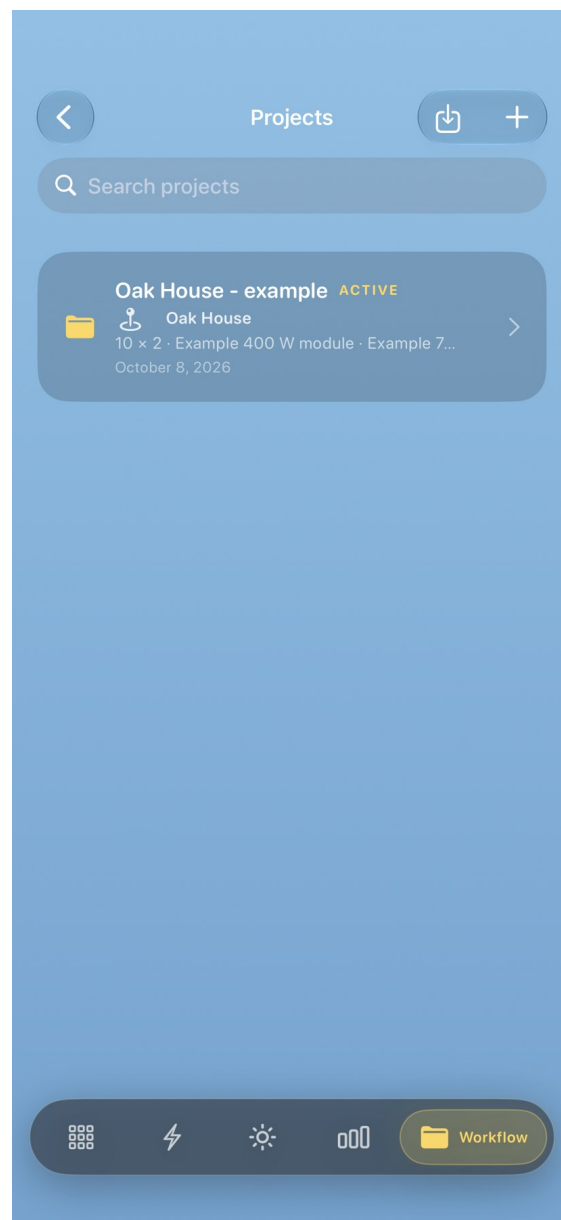
Open the project and use Finish setting up when shown. Enter the site, choose equipment and set modules per string and the number of strings. See the next page for details.

3 Work through the design

Start with String Sizing and Inverter Match. Continue through the relevant wiring, site and energy tools. Review the project name in the banner before changing an input.

4 Save and share

Use the tray-and-arrow Save to project menu to keep a calculator result. Return to the project to review checks and create its PDF report.



iPhone · Your first project
Actual app view; example data.

For a quick standalone calculation, use the project banner to leave the active project. Check the banner before experimenting with another design.

WORKFLOW > PROJECTS > SETUP

Set the site and equipment

Site

Enter a site name, latitude and longitude, or choose Use my location. The app can suggest a nearby place name offline. Location permission is optional when you enter coordinates yourself.

Design temperatures

Set Record low and Record high for the installation. The cold value affects string voltage. Review suggested climate temperatures before adopting them; monthly sunlight data and extreme temperatures serve different purposes.

Equipment without a detour

Open Choose or Change beside Panel, Inverter or Battery. Select an existing item, or choose Add new panel, Add new inverter or Add new battery. Save the editor to add the item to the library and select it for this project.

Array layout

Modules per string is the number connected in series. Strings is the number of parallel strings. The app calculates the total module count and array power. Use String Sizing if the series count is not yet known.

Finish

Tap Done. Resolve remaining setup prompts before treating project checks as design results. A battery is optional for a grid-connected project.

iPhone · Set the site and equipment
Actual app view; example data.

Generic equipment is useful for exploration, but it is not a substitute for the actual manufacturer specifications.

WORKFLOW > EQUIPMENT LIBRARY

Build your equipment library

Add or edit

Choose Panels, Inverters or Batteries and tap +. Tap an existing library item to edit it. The item menu also offers Duplicate and Delete.

Panel fields

Record power, Voc, Vmp, Isc, Imp, both voltage temperature coefficients, and physical length and width. Temperature coefficients use percent per degree Celsius. Dimensions use the units shown in the editor. On supported hardware, Measure length and Measure width open a two-point camera capture.

Inverter fields

Record AC power, maximum DC voltage, MPPT start voltage, maximum MPPT current and number of MPPT inputs. Add maximum input Isc per MPPT when the datasheet provides it. An unknown rating leaves that project check unevaluated.

Battery fields

Choose chemistry and enter nominal voltage and amp-hour capacity. Review the calculated energy to catch a misplaced decimal or incorrect voltage.

Save deliberately

Fix validation errors before saving. If saving fails, the editor remains open with an error. Cancel closes the editor without selecting new equipment for the project.

The screenshot shows the 'New Panel' editor interface. At the top are 'Cancel', 'New Panel', and 'Save' buttons. The form is organized into three main sections:

- IDENTITY**: Contains a text field for 'New Panel' and a 'Rated power' field set to '400 W'.
- ELECTRICAL (STC)**: Contains seven fields: 'Voc' (37 V), 'Vmp' (31 V), 'Isc' (13.7 A), 'Imp' (12.9 A), 'Coeff Voc' (-0.27 %/°C), and 'Coeff Vmp' (-0.34 %/°C).
- DIMENSIONS**: Contains 'Length' (1.72 m) and 'Width' (1.13 m) fields.

At the bottom, a note states: 'Projects keep their own copy of these specs. Changes apply the next time you choose this item.'

iPhone · Build your equipment library
Actual app view; example data.

Projects hold their own equipment snapshots. Editing a library item does not automatically change an existing project; select it again to use the revised specifications.

WORKFLOW > PROJECT DETAIL

Understand the check summary

PASS / FAIL

These labels refer to an individual calculated check. A pass means the supplied values met that check. A failure identifies a limit or condition that needs review.

NOT CHECKED

Required information is missing for that check. For example, add the inverter maximum input short-circuit rating to evaluate that limit. Not checked is excluded from the evaluated-check denominator.

PROVISIONAL

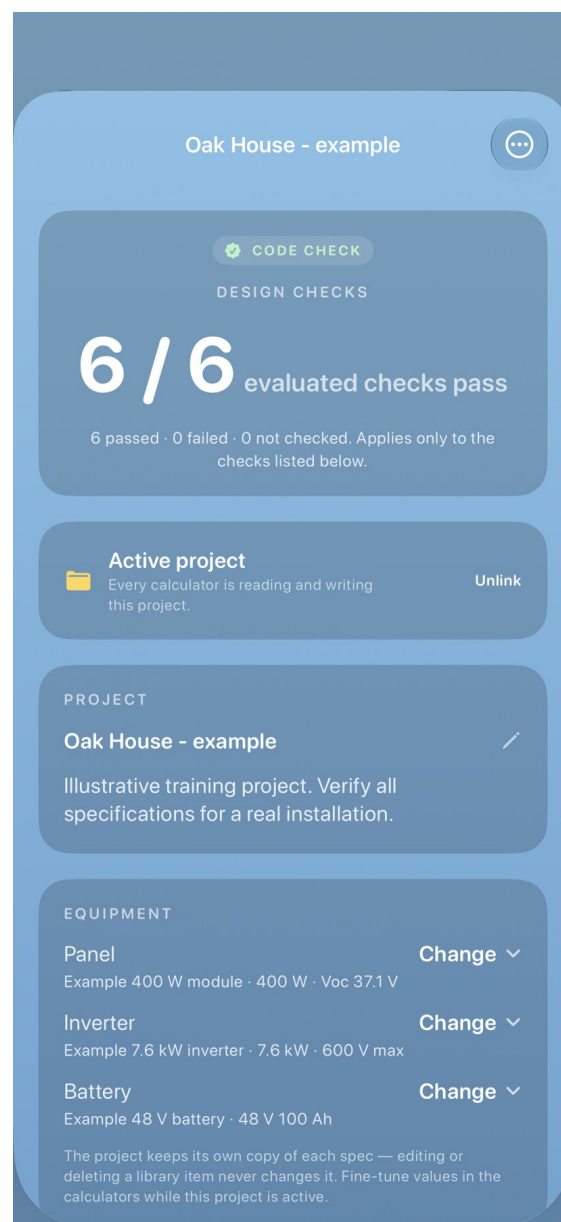
Site, equipment or layout setup is incomplete. The app may still display exploratory results, but they are marked provisional instead of presenting a completed design.

ADVISORY

A design observation, such as the DC:AC ratio, is separate from the pass/fail total. It can help you compare designs without implying a code violation.

ESTIMATE

Production, savings and shading results depend on models and assumptions. Read the range and assumptions, not only the large headline number. The PDF carries the same coverage and scope notes.



iPhone · Understand the check summary
Actual app view; example data.

The project summary covers its listed calculations. It does not verify installed wiring, structural suitability or complete installation compliance.

ARRAY > STRING SIZING

String Sizing

Use it for

Find the allowable number of modules in a series string for the entered panel, inverter voltage limits and temperature assumptions.

1 Load the panel

Choose a panel with Load, or enter Voc, Vmp and their temperature coefficients. With a project active, the tool reads the project equipment snapshot.

2 Set temperatures

Enter the record low, record high and hot-cell temperature adder. Check whether the fields show Celsius or Fahrenheit. The coefficient fields remain in %/°C.

3 Set inverter limits

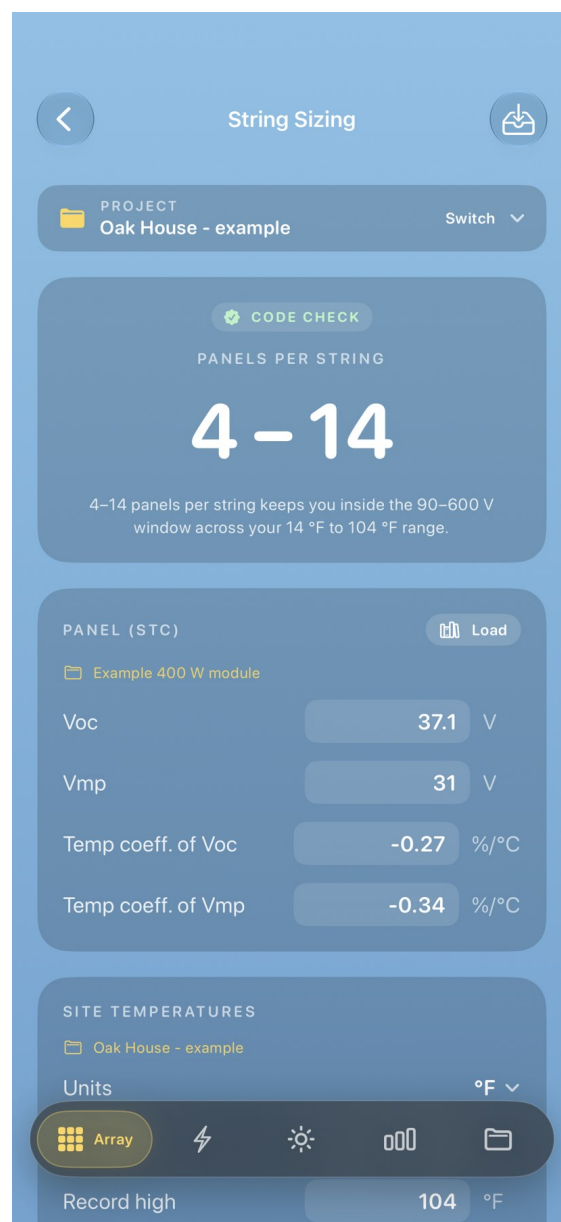
Enter maximum DC input voltage and minimum MPPT start voltage. Review corrected cold Voc and hot Vmp below the inputs.

Read the result

The maximum count is limited by cold open-circuit voltage; the minimum count is limited by hot operating voltage. The sample project displays 4-14 modules per string, with 10 selected. That range belongs only to these example inputs.

Keep the result

Use Save to project to record the current calculation. Update the project layout if you decide on a different string length.



iPhone · String Sizing
Actual app view; example data.

A valid string window does not establish current compatibility. Continue with Inverter Match and the project checks.

ARRAY > INVERTER MATCH

Inverter Match

The screenshot displays the 'Inverter Match' app interface. On the left is a sidebar with navigation options: 'Array' (selected), 'String Sizing', and 'Inverter Match'. The main area is titled 'Inverter Match' and shows a project named 'Oak House - example'. A large central display shows the 'DC : AC RATIO' as 1.05, with a note indicating it is outside the typical 1.1–1.5 range. Below this are three sections: 'ARRAY' (with a 'Load' button), 'SANITY CHECKS' (with a 'CODE CHECK' button), and 'INVERTER & COMBINER' (with a 'Load' button). Each section contains input fields for various parameters.

Section	Parameter	Value	Unit
ARRAY	Array STC power	8,000	W
	Module Imp	12.9	A
	Module Isc	13.7	A
	Strings per MPPT	1	
	Total parallel strings	2	
INVERTER & COMBINER	Inverter AC rating	7600	W
	Max current per MPPT	20	A
	Combiner / fuse rating	40	A
SANITY CHECKS	Current per MPPT input	12.9 A / 20 A	
	Combiner current (n x Isc x 1.25)	34.2 A / 40 A	

Mac · Actual app view with fictional project data.

Enter the array and input loading

Load equipment or enter module power, total module count, module Imp and Isc. Set Strings per MPPT and Total parallel strings to match the intended connection. They describe different parts of the design.

Compare equipment ratings

Enter inverter AC power, maximum current per MPPT and the combiner/fuse rating. Review the DC:AC ratio and the separate current checks. A ratio advisory does not cancel a failed current check.

Interpret the example

The 8 kW example array with a 7.6 kW inverter gives a ratio of about 1.05. Treat this as a comparison, not a recommended ratio for every job. Save the result, then review the project summary for any missing input short-circuit rating.

Use the actual input grouping and equipment datasheet limits. Equal distribution assumptions may not describe every inverter connection.

WIRING > VOLTAGE DROP

Voltage Drop

Use it for

Estimate voltage lost in a cable run and compare a selected conductor with a target percentage drop.

1 Define the circuit

Choose circuit type and conductor material. Enter operating current and system voltage. Keep these values consistent with the circuit you are assessing.

2 Define the run

Choose wire size and enter One-way length. The app handles the circuit path calculation; do not double the entered distance yourself. Set Target max drop.

3 Compare the result

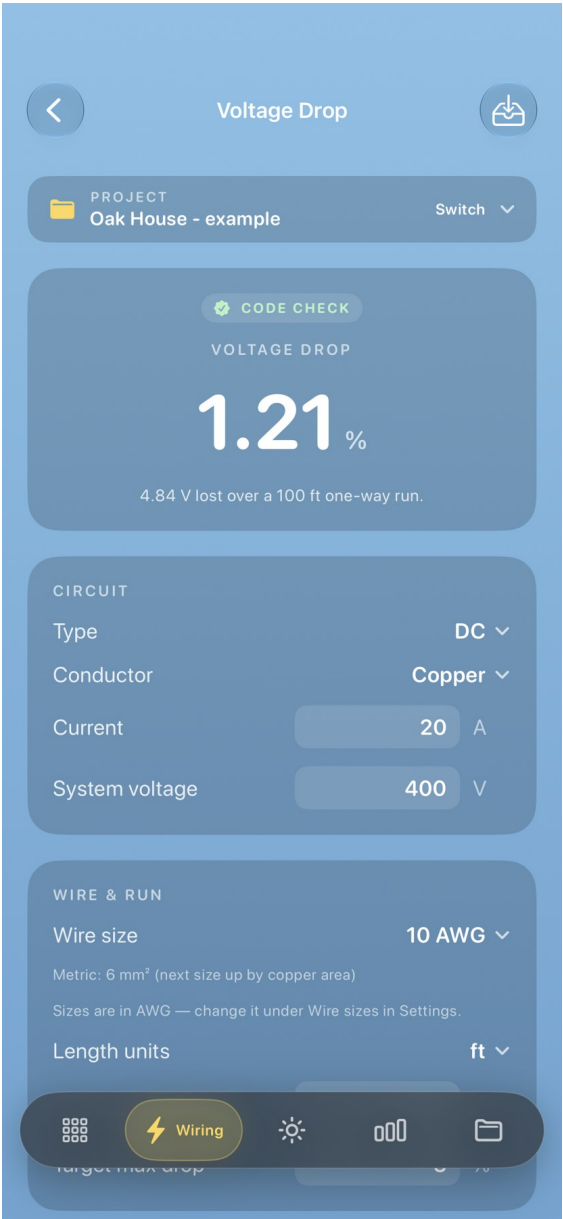
Read the voltage loss, percentage loss and size recommendation. Change the selected conductor to compare alternatives. AWG or metric sizes follow the Wire sizes setting.

Bring in a measured route

Conduit & Cable Run can send its route length plus slack to this tool. After using Send to Voltage Drop, revisit current, voltage, circuit type and wire size before saving.

Save

Use Save to project to keep the result with the job. The active project banner identifies the destination context.



iPhone · Voltage Drop
Actual app view; example data.

A voltage-drop result is only one cable check. Use Ampacity & OCPD or Battery Cables & Fuses for the corresponding current and protection checks.

WIRING > AMPACITY & OCPD

Ampacity & OCPD

Start with the wire standard

Settings > Units > Wire sizes selects AWG - NEC or metric - IEC. This changes the method and fields, not just the displayed unit.

AWG workflow

Enter module Isc and the parallel strings carried by the circuit. Set ambient temperature, conductors in conduit, insulation, terminal rating and conductor material. Review the current calculation, derating and protection result.

Metric workflow

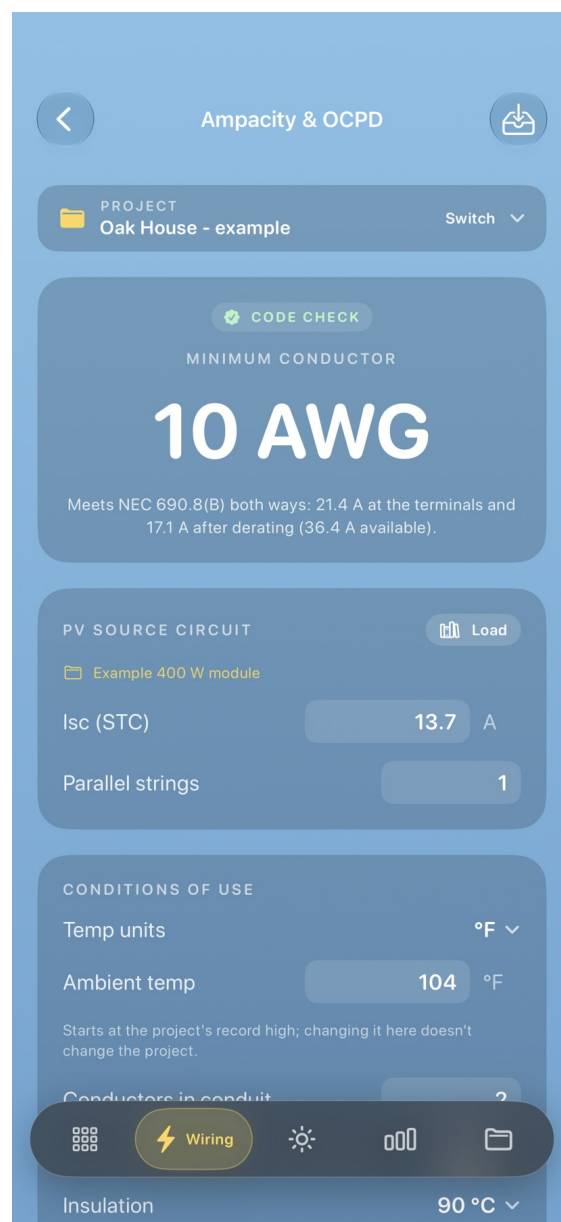
Enter Isc, parallel strings and the module maximum series fuse rating when known. Choose ambient temperature, grouped circuits, insulation and installation method. Check the stated assumptions for copper conductors and the selected method.

Read the table

The size-by-size section helps explain why a conductor qualifies or fails. Read terminal and derated ratings where shown, rather than choosing a wire from the headline alone.

Project behavior

The tool starts with the project record-high temperature, but its local ambient and parallel-string adjustments do not rewrite those project values.



iPhone · Ampacity & OCPD
Actual app view; example data.

Count only the strings and conductors that belong to the circuit being checked. A whole-array count can produce a different answer from a one-string circuit.

WIRING > BATTERY CABLES & FUSES

Battery Cables & Fuses

Gather the ratings

Have inverter continuous power and efficiency, battery voltage and chemistry, cable route length, installation conditions and battery short-circuit current available.

1 Enter power and battery

Set the inverter continuous wattage and efficiency. Choose battery voltage and chemistry. Enter battery short-circuit current if the manufacturer supplies it; zero represents unknown.

2 Enter the route

Use One-way length and a maximum voltage-drop target. Select installation conditions, insulation where shown and ambient temperature.

3 Read current and fuse

Review calculated load current and fuse information. The cable comparison must satisfy both ampacity and voltage-drop requirements. Check warnings about fault current or interrupt rating separately.

4 Review candidates

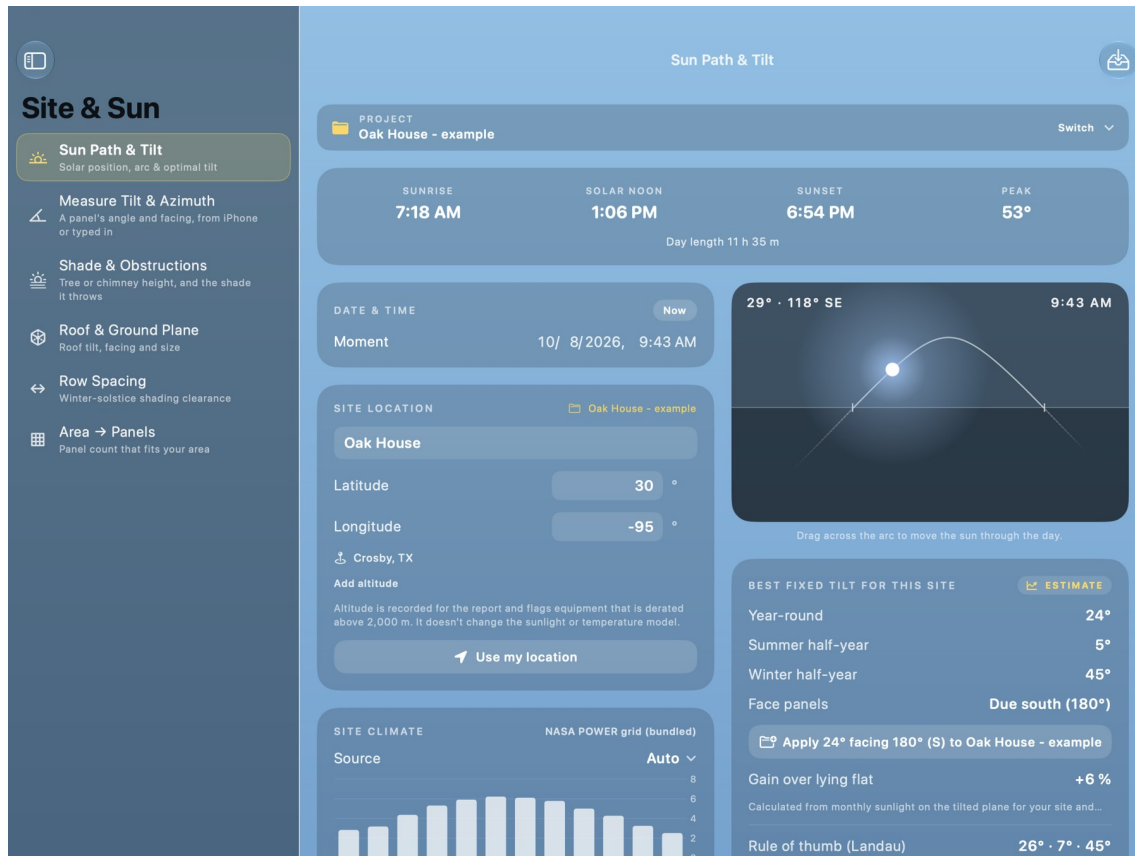
Use the cable-by-cable results to compare sizes. A missing fault-current input is not evidence that a fuse can interrupt the battery fault current. Keep that limitation with the saved result.

iPhone · Battery Cables & Fuses
Actual app view; example data.

Efficiency fields use a fraction when shown without a percent sign: 0.90 means 90%. Always follow the unit printed next to the field.

SITE & SUN > SUN PATH & TILT

Sun Path & Tilt



Mac · Actual app view with fictional project data.

Choose the site and date

Set location, date and time. Use Now to return to the present. The path and sunrise/sunset information refer to that location and selected date.

Explore the day

Drag across the sun arc to move through the day. Read solar elevation and facing together. A low sun angle can explain a long obstruction shadow even when midday appears clear.

Compare fixed tilt

Review the year-round and seasonal tilt study, which uses the site climate model. An energy-oriented tilt suggestion is not a roof-fit or structural result. Carry the chosen tilt into the project or the relevant calculation and recheck production.

For comparisons, keep location, date and climate source consistent. Seasonal behavior is especially important for off-grid and row-spacing work.

SITE & SUN > MEASURE TILT & AZIMUTH

Measure Tilt & Azimuth

On iPhone and supported iPad

Rest the device flat on the panel or frame, top edge pointing up the slope. Hold still. Use Capture automatically when steady, or capture manually.

Improve repeatability

Enable Two readings, 180° apart. Capture once, rotate the device 180° in place, then capture again. The app averages the pair. If readings disagree, check that the device is not rocking on its case.

Read the instrument

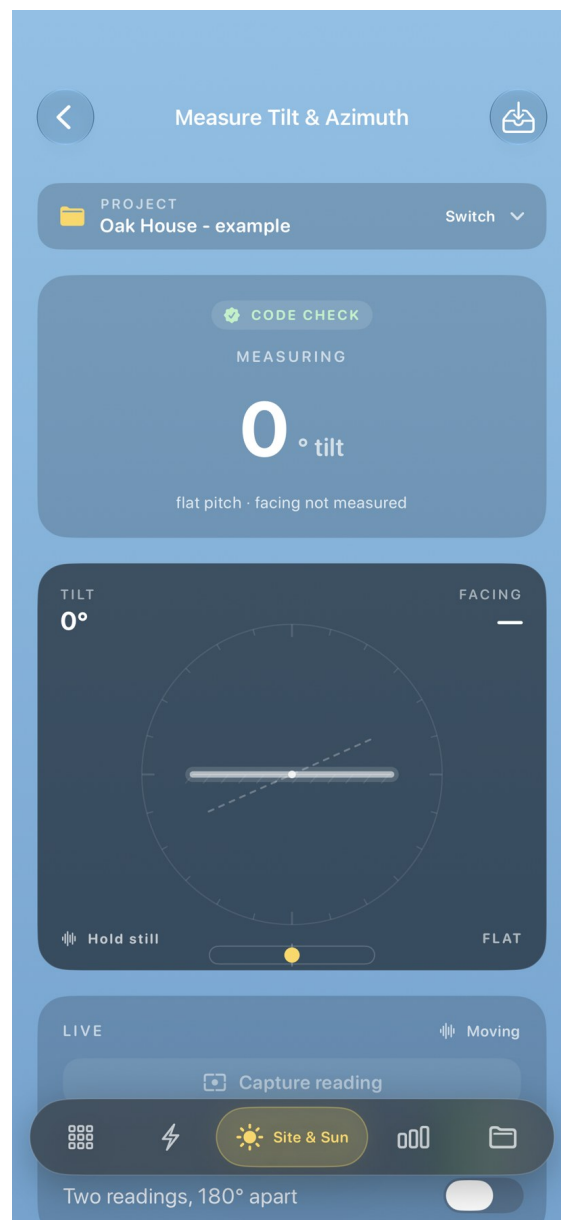
Review tilt, roof pitch, facing and cross-slope. Gravity supplies tilt; the compass supplies direction. Nearby metal and magnetic accessories can affect facing. Check whether a magnetic-heading note is shown.

Apply deliberately

After freezing a reading, choose Use in the named project or Use in quick calculations. Saving a calculation and applying a measurement serve different purposes.

Mac alternative

Mac shows typed tilt and facing controls. Enter values taken on site, or use the values saved with the project on a mobile device.



iPhone · Measure Tilt & Azimuth
Actual app view; example data.

The pictured iPhone simulator shows the sensor interface, not a physical measurement. Real readings require supported device sensors.

FIELD WORK > CAMERA TOOLS

Camera measurements: the basics

Prepare the view

On supported iPhone or iPad hardware, allow camera access when using a camera tool. Move slowly so tracking can establish the scene. Wait for the target indicator and read any tracking message.

Mark with intent

Aim the center crosshair at the intended point and use the tool's mark button. The gold dots and lines show the captured geometry. Choose Undo point for the latest mistake or Start over for a fresh measurement.

If tracking changes

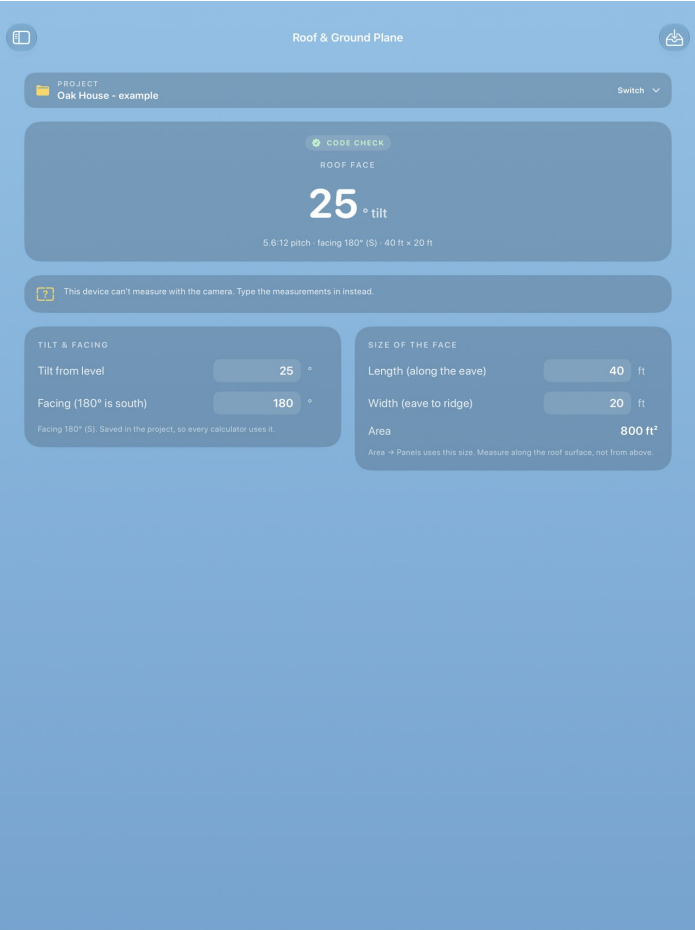
If the session is interrupted, follow the app's instruction to clear and recapture points. Reflective, featureless, distant or poorly lit surfaces can make point placement difficult.

Use a fallback

Typed inputs remain useful when camera measurement is unavailable. A Mac uses typed values and saved field measurements. Roof tilt can also be entered manually or measured with the device motion tool.

About the illustrations

The next four pages use AI-generated scene mockups with gold annotations. They explain point placement and geometry; they are not live camera captures or proof of accuracy.

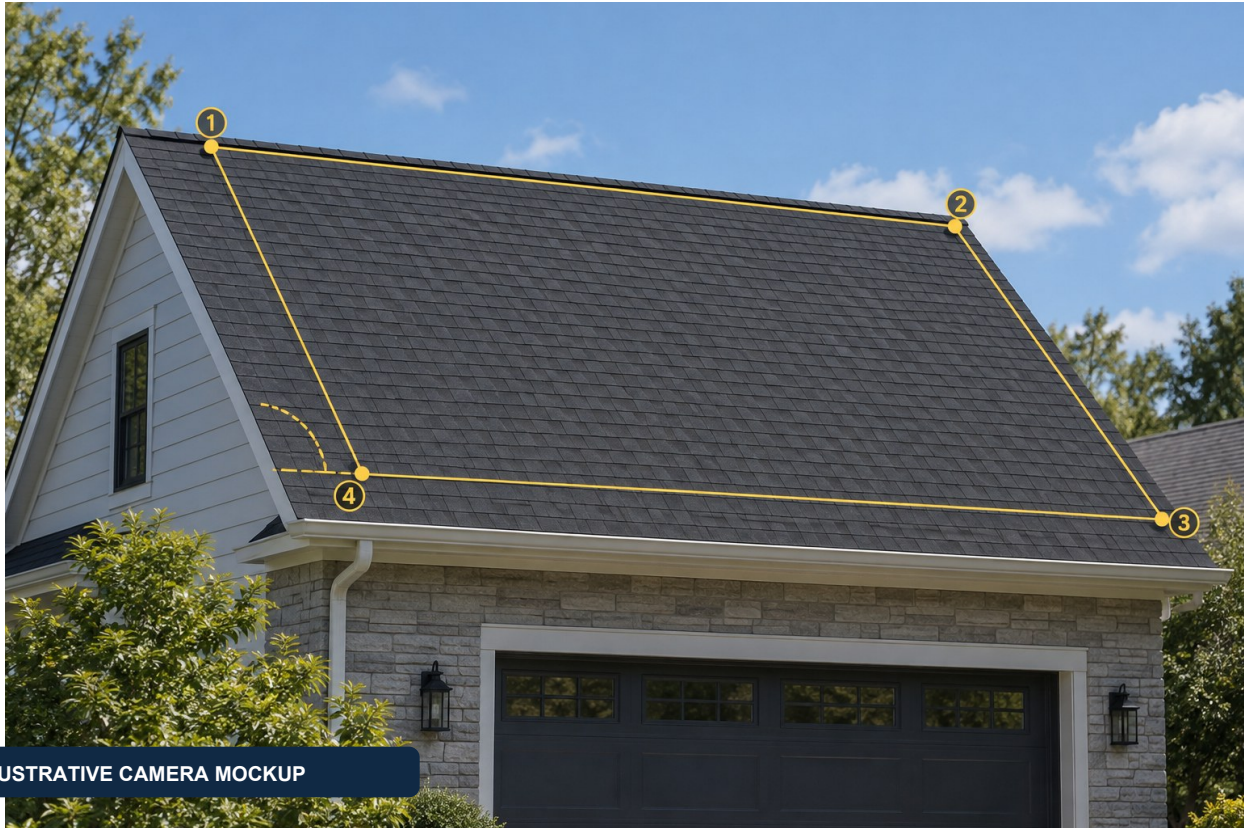


iPad · Actual app view
Example data; scroll for further controls.

Confirm measurements that matter to the installation with an appropriate field method. A clean-looking overlay alone does not establish accuracy.

SITE & SUN > ROOF & GROUND PLANE

Capture a roof or ground plane



ILLUSTRATIVE CAMERA MOCKUP

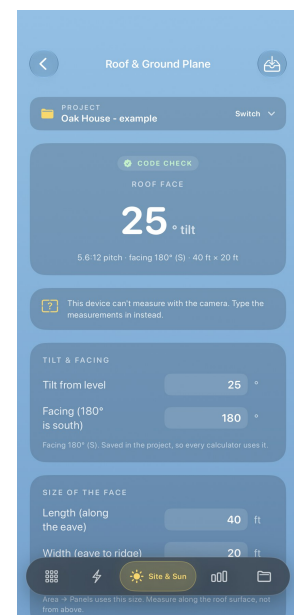
Capture sequence

1. Mark at least three well-separated points on the same surface.
2. Add a fourth corner to capture the face size.
3. Review tilt, facing and the points-off-plane reading. Recapture if points landed on different surfaces.

Use the result

Choose Use as the roof size to send dimensions to Area → Panels. Use tilt & facing in the project applies orientation separately. On Mac, type the tilt, facing and face dimensions into the corresponding fields.

Illustrative camera mockup. The screenshot shows the simulator's typed fallback; camera controls appear on supported hardware.



Actual app fallback view

SITE & SUN > SHADE & OBSTRUCTIONS

Shade & Obstructions



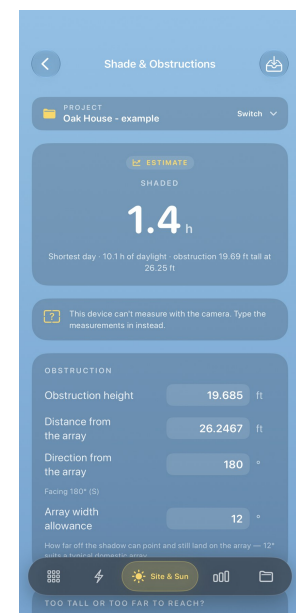
Capture in this order

1. Mark the array position.
2. Mark the obstruction's base.
3. Mark its top. Read the derived height, distance and direction, or enter these values manually.

Explore shading

Check Today or the shortest-day option, direction from the array and array width allowance. Read the shaded hours and clearance estimate. If the top is unreachable, use the distance, upward-angle and eye-height helper, then Use as the obstruction height.

Illustrative camera mockup. This obstruction study is separate from Production & ROI, whose displayed assumptions exclude shading losses.



Actual app fallback view

WIRING > CONDUIT & CABLE RUN

Measure a cable route

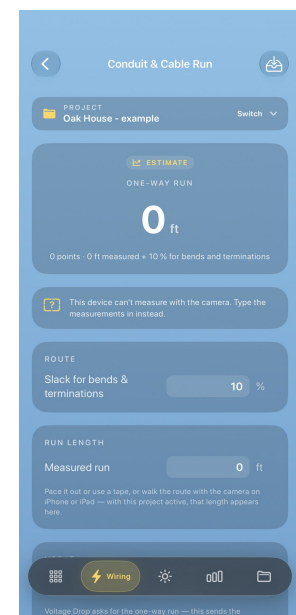


Follow the route

1. Mark the start of the run.
2. Walk the route and mark each corner.
3. Mark the end, then review the segments. Measure the routed path, not a diagonal shortcut between endpoints.

Add and transfer

Enter Slack for bends & terminations. Alternatively, type a tape-measured length into Measured run. Choose Send to Voltage Drop to transfer the one-way length including slack. The sample screenshot begins at zero until a route is entered.



Actual app fallback view

Illustrative camera mockup. Camera and typed route measurements can be retained with the active project; the Voltage Drop transfer is an explicit action.

WIRING > WORKING SPACE

Check working clearance



ILLUSTRATIVE CAMERA MOCKUP

Measure the available space

Measure or type Depth in front, Width and Headroom. On supported hardware, each dimension can be captured with the camera. Keep the measurement tied to the actual equipment position.

Compare the requirement

Enter Voltage to ground, Equipment width and the applicable Condition. Read the required depth, width and headroom and any shortfalls. This tool uses the app's US NEC working-space rules even when values are displayed in metric units.

Illustrative clearance diagram, not a dimensioned installation plan. The result covers the stated working-space inputs and assumptions.



Actual app fallback view

SITE & SUN > ROW SPACING

Row Spacing

Use it for

Compare row separation against winter shading for the selected site, array geometry and no-shade window.

1 Define geometry

Enter Panel length (along slope) and Tilt angle. Use the tilted dimension, not the horizontal projection of the module.

2 Choose the window

Select the no-shade time window. A noon-only study is different from a wider morning-to-afternoon window; read the chosen window with the spacing result.

3 Enter ground slope

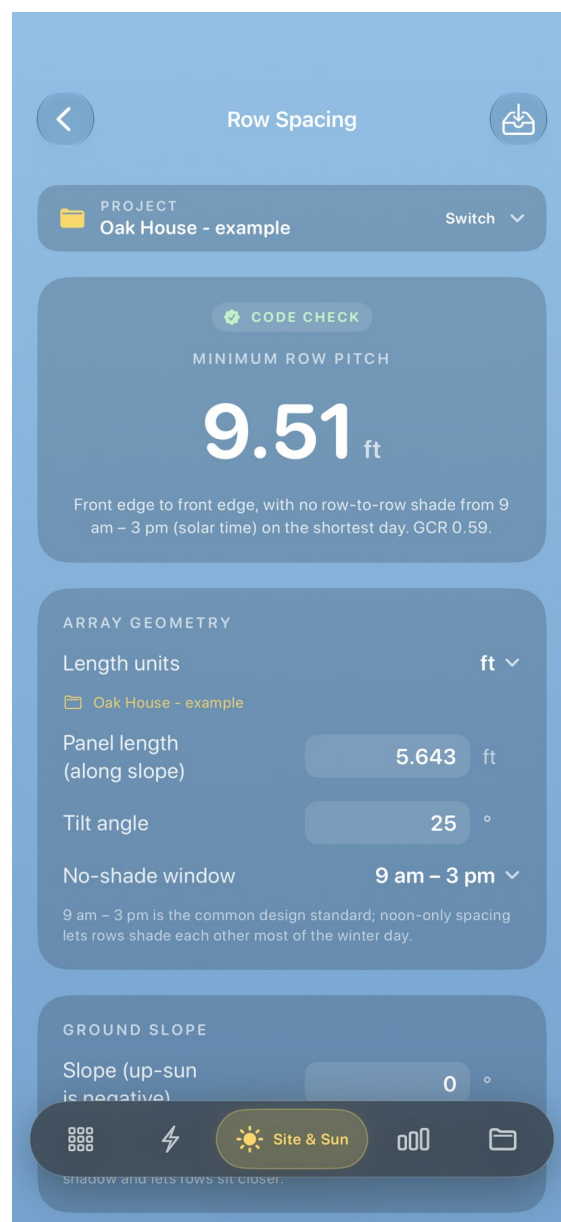
Leave slope at zero for level ground. The app defines positive slope as ground rising toward the next row, away from the sun; up-sun is negative. On supported hardware, use Measure with the camera and mark two ground points in the row direction. Spread the points apart; a very short baseline cannot establish a reliable slope.

4 Read the tradeoff

Review required spacing, the shortest-day information and spacing-versus-shade comparison. Match the app's named distance to your layout rather than interchanging row pitch and clear gap.

Save

Keep the calculation with the project so the site, tilt and window assumptions are recorded together.

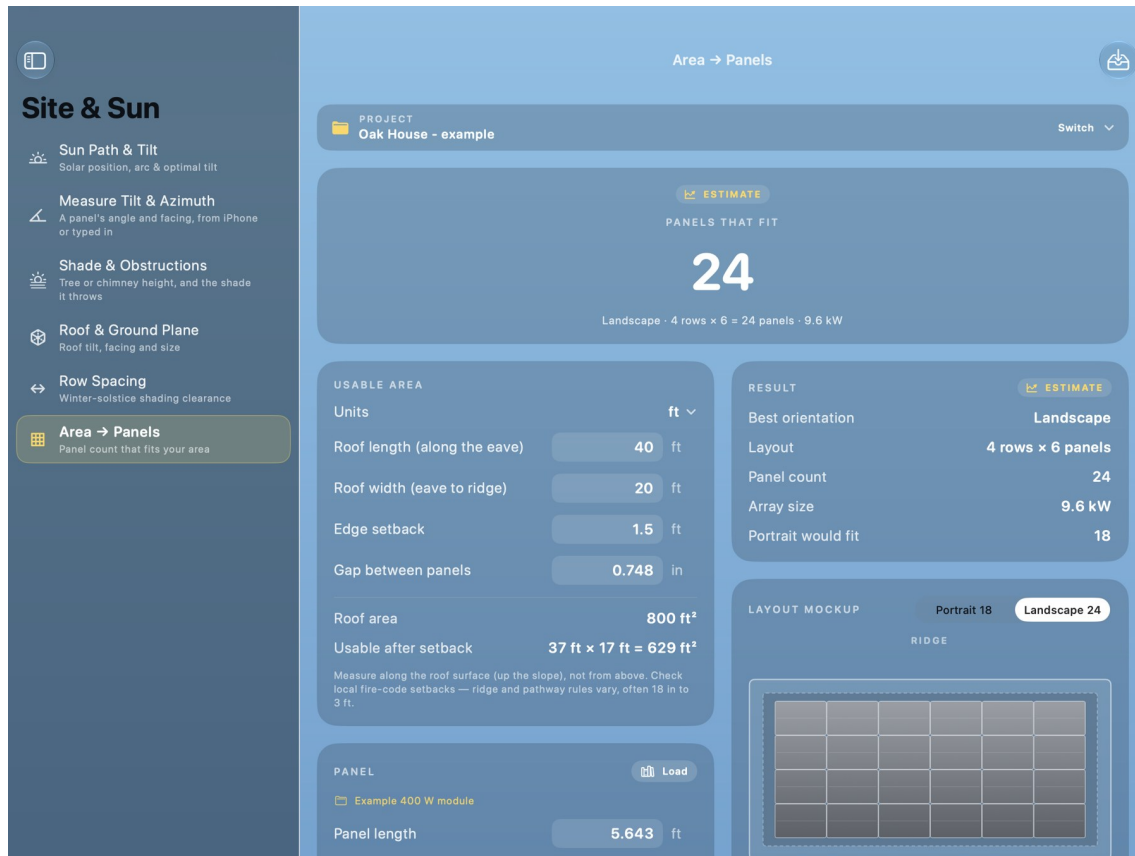


iPhone · Row Spacing
Actual app view; example data.

Changing the no-shade window or slope can change spacing materially. Compare alternatives with all other inputs held constant.

SITE & SUN > AREA → PANELS

Area to Panels



Mac · Actual app view with fictional project data.

Enter usable roof geometry

Set Roof length (along the eave), Roof width (eave to ridge), Edge setback and Gap between panels. Measure along the roof surface. Load a panel or enter its dimensions and rated power.

Compare layouts

Review panel count and total nameplate power. Use the orientation control to compare portrait and landscape where available. The layout drawing identifies ridge and eave so you can relate the grid to the roof.

Connect the workflow

A captured roof face can supply dimensions through Use as the roof size. The rectangular fit is a planning estimate. Resolve obstructions, pathways, roof shape and the applicable setbacks before treating a count as installable capacity.

A geometric panel count and an electrical string layout answer different questions. Reconcile the chosen count with modules per string and number of strings.

ENERGY > PRODUCTION & ROI

Production & ROI

1 Set the system

Use project array power or enter system size. Set tilt, azimuth and system derate. The derate is the retained fraction after the modeled losses; 0.78 means 78% remains.

2 Check the climate

Review the site and climate source. Auto uses bundled climate data where available. Read the source label and uncertainty range; a fallback model has different precision from site data.

3 Add economics

Enter electricity rate, system cost and incentives. Read annual production, monthly pattern, savings and simple payback together.

4 Read assumptions

The app's year-one model uses a flat energy rate, assumes all production offsets purchases at that rate, and excludes shading losses. Time-of-use and export tariffs are not represented by that single rate.

Save for comparison

Save the calculation before changing orientation or costs. Use descriptive project copies when comparing complete alternatives.



iPad · Actual app view

Example data; scroll for further controls.

An estimate range is not a guaranteed yield or return. A shade study does not automatically apply a shade-loss correction to this production model.

ENERGY > PRODUCTION & ROI > LIFETIME

Explore lifetime performance

Find the controls

Scroll below the year-one results to Over the system's life. Set the analysis period, first-year loss, annual degradation and annual electricity price rise.

Model a replacement

Enable Replace the inverter once if needed, then set replacement cost and year. Keep the year within the analysis period.

Read the output

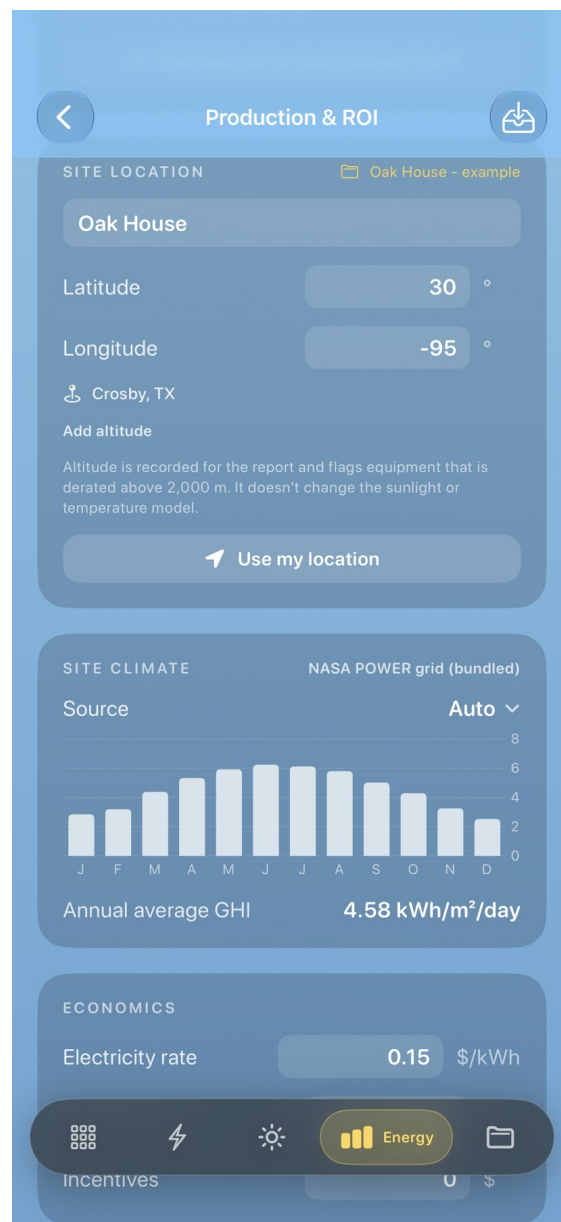
Review the production trend, remaining output, lifetime energy and financial estimates. These show how the selected assumptions accumulate over time; they are not a manufacturer warranty.

Compare useful scenarios

Try a base case and a more conservative case with lower electricity-price growth or higher replacement cost. Save each result with its assumptions so the comparison remains understandable.

Know the boundary

The app describes lifetime payback as undiscounted. Financing, maintenance and inflation beyond the selected electricity-price rise are outside that calculation.

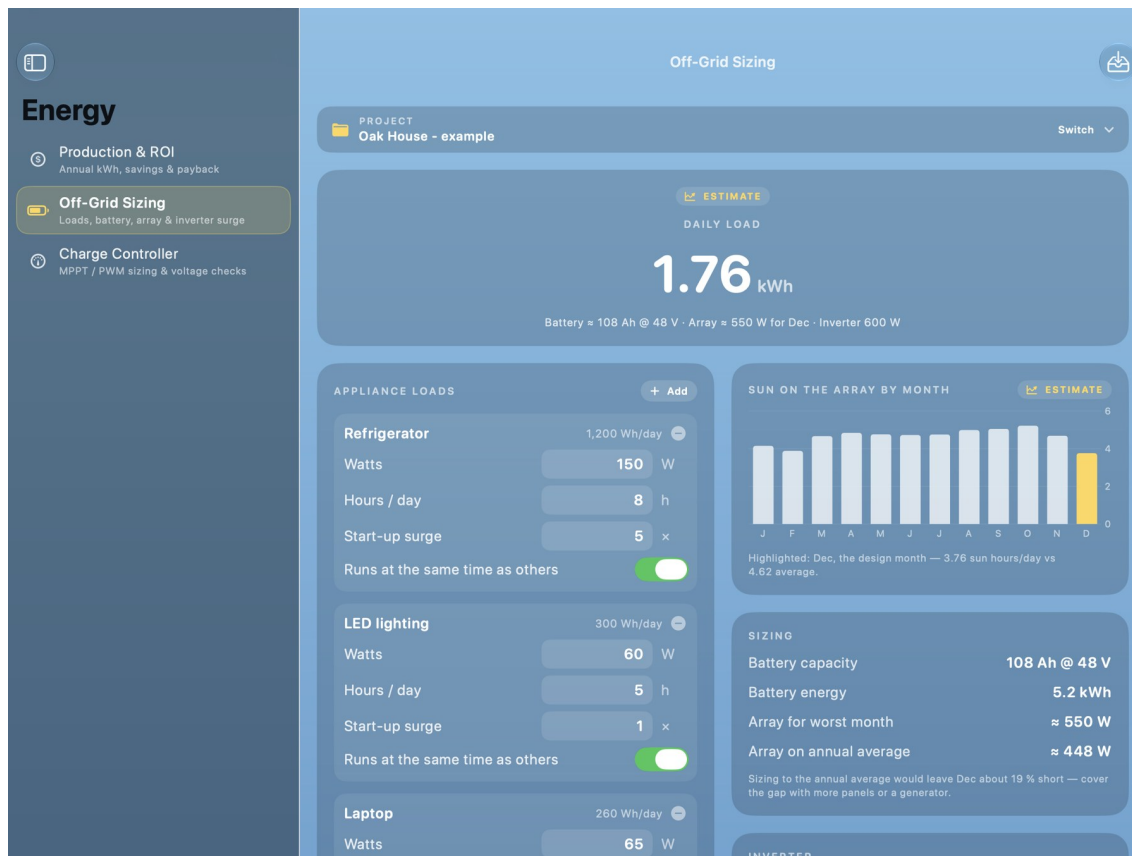


iPhone · Explore lifetime performance
Actual app view; example data.

The screenshot is a scrolled view of the production tool. Scroll farther in the app to reach the lifetime assumption controls.

ENERGY > OFF-GRID SIZING

Off-Grid Sizing



Mac · Actual app view with fictional project data.

Build a realistic load list

Use Add to choose a typical appliance or Blank load. For each item, enter operating watts, hours per day and start-up surge. Include the loads that may run at the same time.

Set storage and solar assumptions

Choose days of autonomy, system voltage, chemistry, depth of discharge and battery efficiency. Set array tilt and system efficiency. The special tilt value -1 asks for the best winter tilt.

Interpret the design month

Review daily energy, battery size, array size and inverter running/surge requirements. The highlighted worst month drives the solar estimate, not the annual average. A month with no usable sun needs a different operating or backup plan; it is not solved by ignoring that month.

Typical appliances are starting points. Replace their values with the actual equipment loads and operating schedule before using the result.

ENERGY > CHARGE CONTROLLER

Charge Controller

Enter the module and array

Load a panel or enter power, Voc, Vmp, Isc and temperature coefficients. Set modules in series, strings in parallel and site temperatures.

Match storage

Choose battery voltage and chemistry. Select the controller type, MPPT or PWM, to match the intended equipment.

Add controller limits

Enter the controller maximum PV voltage and maximum PV current from its datasheet. A zero maximum PV-current field skips that check; it does not represent a verified unlimited rating.

Read separate checks

Review corrected array voltage, operating behavior and controller output-current sizing. Distinguish the input voltage/current limits from the suggested output current.

Review clipping

The app notes that a smaller MPPT output-current rating may clip generation during strong sunlight. That observation does not permit exceeding the controller's PV input limits.

Record the selection

Save the calculation with the project and include any missing-rating caveats when comparing controller candidates.

Charge Controller

PROJECT
Oak House - example

Switch

CODE CHECK

MPPT CONTROLLER

200 A

8,000 W ÷ 48 V = 166.7 A output. Cold string Voc 406.1 V vs 150 V max.

MODULE	Value	Unit
Power	400	W
Voc	37.1	V
Vmp	31	V
Isc	13.7	A
Temp coeff. of Voc	-0.27	%/°C
Temp coeff. of Vmp	-0.34	%/°C

ARRAY & SITE

Strings in parallel: 2

Energy

iPhone · Charge Controller
Actual app view; example data.

Use the same string layout and temperature assumptions as your other array calculations, then check the specific controller datasheet.

WORKFLOW > PROJECT DETAIL > SHARE

Save calculations and reports

Live project versus saved result

The project assessment is recalculated from current project inputs. A saved calculator entry records a result at the time it was saved. If its inputs later change, the entry can be marked as changed since saving.

Save a calculator

Use the tray-and-arrow toolbar menu and choose the active project, another project or a new project. Saving into a different project does not make the original inputs belong to that project; source context is retained.

Build the PDF

Open the project and scroll to Share. Choose Share PDF report. The report is generated at that moment from current inputs, with equipment, site, layout, checks, estimates, field measurements and saved calculations as available.

On Mac

Use Save PDF report or Print report. Command-S saves the report from the project page; Command-P prints while that page is active.

Before sending

Check project identity, equipment names, missing checks, assumptions, units and stale saved entries. Add your company details in Settings > Company & Reports.

The screenshot displays the 'Oak House - example' project page in the Sun Sizer Pro app. The interface is organized into several sections:

- Battery Section:** Shows 'Example 48 V battery · 48 V 100 Ah'. A note states: 'The project keeps its own copy of each spec — editing or deleting a library item never changes it. Fine-tune values in the calculators while this project is active.'
- ARRAY LAYOUT Section:**
 - Modules per string: 10
 - Strings: 2
 - Total: 20 modules · 8 kW
 - Tilt: 25 °
 - Azimuth: 180 °
 - Facing: 180° (S)
- SITE Section:**
 - Project Name: Oak House
 - Latitude: 30 °
 - Longitude: -95 °
 - Location: Crosby, TX
 - Add altitude: (input field)
 - Record low: 14 °F
 - Record high: 104 °F
 - Cell-temp adder: 54 °F

iPhone · Save calculations and reports
Actual app view; example data.

A PDF is a readable record. Use a .sunsizer project file when the recipient needs to reopen and work with the project in Sun Sizer Pro.

WORKFLOW > PROJECTS / SETTINGS

Share, duplicate and synchronize

Project files

From a project, choose Share project file (AirDrop). Import a .sunsizer file from the Projects import button or open it from Files. Follow the duplicate prompt when the project already exists. Imports from a newer unsupported format are rejected with a message.

Duplicate and search

Use the project menu to duplicate an alternative before changing it. Search matches project name, notes and site name. On mobile, swipe actions provide duplicate or delete; deletion asks for confirmation.

Enable iCloud

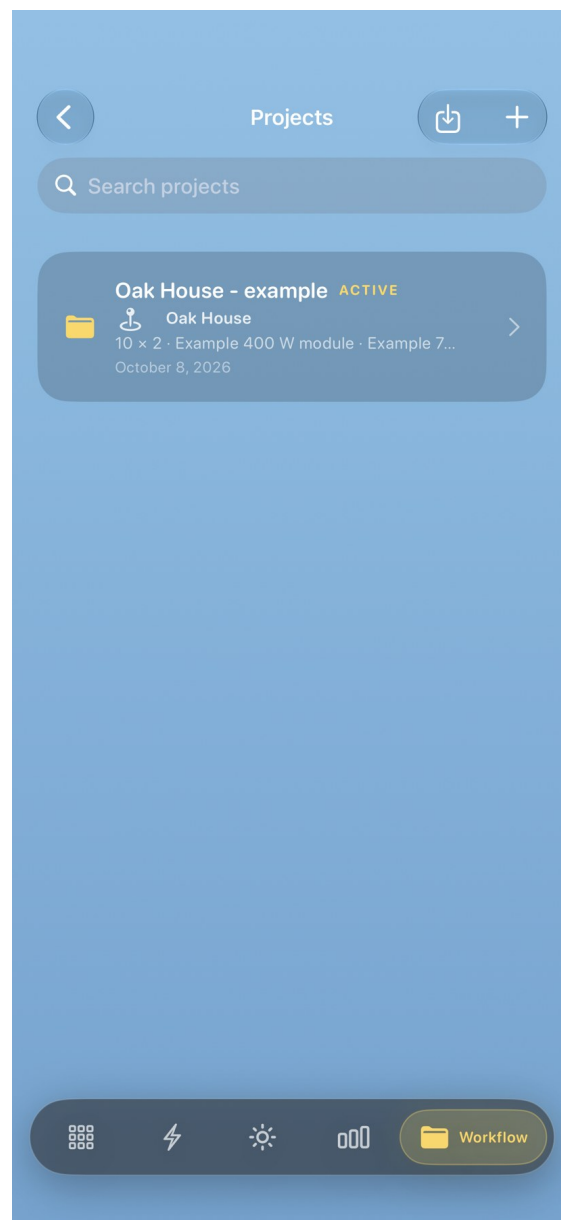
Use the same Apple Account on each device and enable Sync with iCloud in Settings. The setting takes effect next launch. Close and reopen on mobile; quit and reopen on Mac.

What travels

Projects, saved calculations and library equipment sync. Field measurements stored in the active project travel too. Active-project selection, units, display preferences and quick-calculation inputs remain device-specific.

Working offline

Local work remains available offline and catches up after connectivity returns. Check Settings for sync status. Disabling sync keeps the local data and existing cloud copies.



iPhone · Share, duplicate and synchronize
Actual app view; example data.

Deleting a synced project affects the other devices too. Use Undo when offered, and keep exported project files for important handoffs.

SETTINGS

Units, appearance and branding

Units

Choose the unit system, temperature, length and area settings. Stored physical values are converted when units change. Review field suffixes before entering numbers.

Wire sizes

Choose AWG - NEC or metric - IEC. The wiring tools change their calculation assumptions and available settings with this choice. Working Space retains its stated US rule basis.

Display

Sky follows the sun changes the background with the site's sun position. Sunlight mode uses deep navy and opaque cards for higher contrast and overrides the dynamic sky.

Company & Reports

Add a company name, contact information, registration details, website, address and logo. A transparent PNG logo works well on the white report page. Choose US Letter or A4 paper size.

Reference data

Review the installed climate and place-name data in Settings. Site climate, location and ground reflectance controls also affect the relevant calculations.

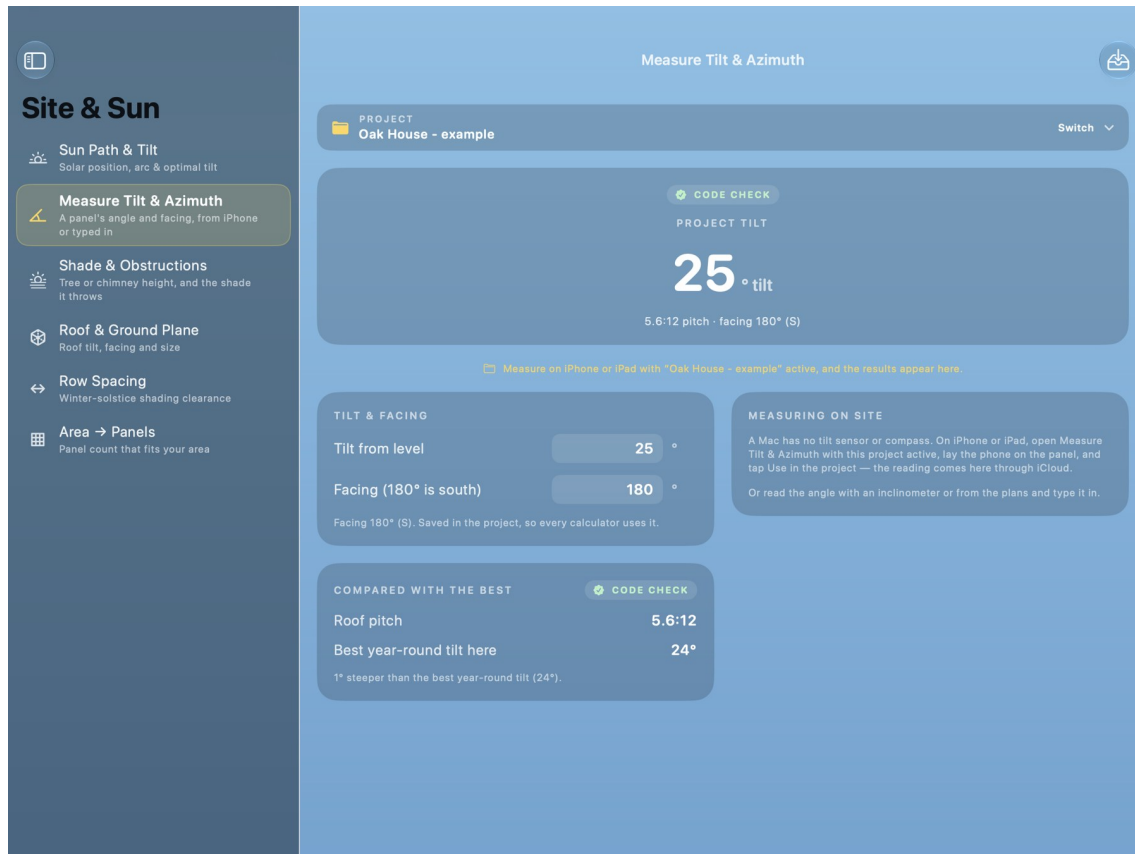


iPhone · Units, appearance and branding
Actual app view; example data.

The screenshot uses a fixed daytime background for consistency throughout this manual. Your app may show a different sky color.

MAC DESKTOP

A practical Mac workflow



Mac · Actual app view with fictional project data.

From field to desk

Capture or enter measurements on iPhone or iPad with the correct project active. On Mac, confirm iCloud status, open that project and make it active locally. Review the saved dimensions and equipment before continuing.

Use desktop controls

The Tools menu opens calculators directly. Command-N creates a project. Command-comma opens Settings. On a project page, Command-S saves a PDF and Command-P prints it.

Finish the handoff

Use the larger window to compare inputs and results, resolve missing ratings and review the report. Mac uses typed tilt, facing and roof dimensions; it does not offer the mobile motion or camera capture experience.

Mac screenshots in this guide are captured from the actual Mac Catalyst app content. Some dialogs and window chrome differ from the mobile screenshots.

ACCESS & PURCHASES

Free tools, trial and Premium

Free access

String Sizing and Sun Path & Tilt remain available without Premium. Existing projects remain viewable and exportable when editing access ends.

14-day trial

Start the trial from the welcome screen, Settings or a locked tool. Read the displayed terms and price before starting. The trial unlocks the tools for 14 days; nothing is charged automatically.

One-time unlock

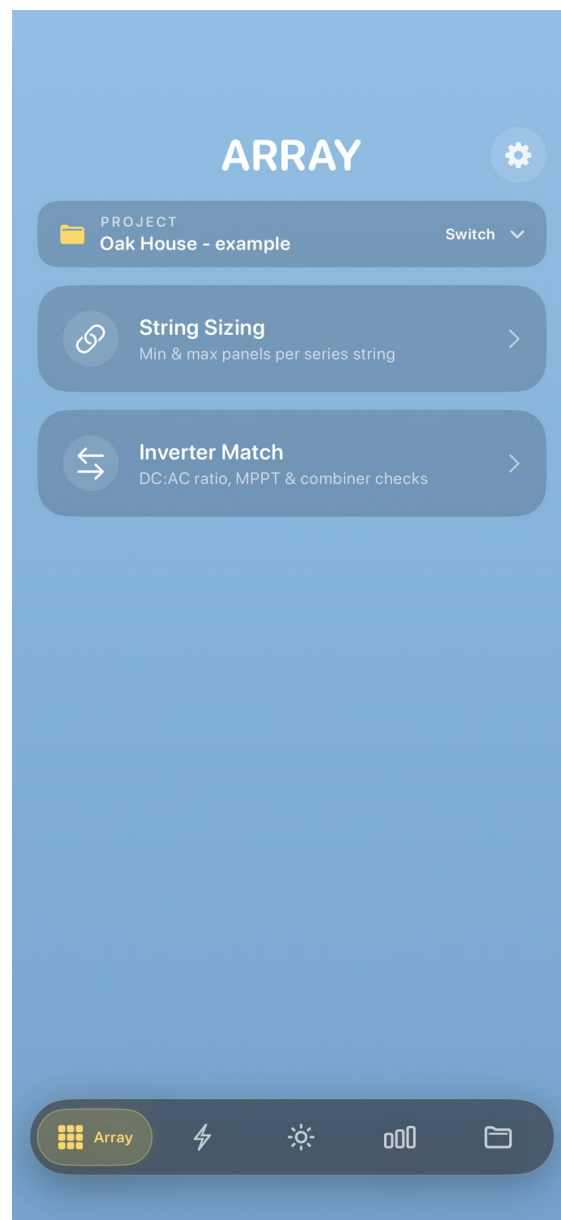
Premium is a one-time purchase. Use Restore purchase when you have already bought it with the same Apple Account. The App Store needs a connection for starting the trial or purchasing.

After the trial

Creating and editing projects, the equipment library, saving results and the other premium tools require the unlock. The project list explains read-only access. Deleting your own projects remains available.

If access looks wrong

Check the Apple Account used for the purchase, restore it and read any App Store error message. The screenshots in this guide show unlocked tools for demonstration.



iPhone · Free tools, trial and Premium
Actual app view; example data.

The manual does not quote a fixed purchase price. Use the price and terms displayed by the app for your account and storefront.

REFERENCE

Troubleshooting

The result is provisional

Open Finish setting up and resolve missing site, panel, inverter and layout items. Do not dismiss a missing-input state merely because another calculator displays a number.

A check says Not checked

Supply the missing rating named in that check. For inverter input short-circuit current, edit or select a library inverter with that datasheet rating, then reload it into the project.

Changing the library did nothing

Projects store equipment snapshots. Choose the revised item again in the project to refresh its specifications.

Camera or compass is unreliable

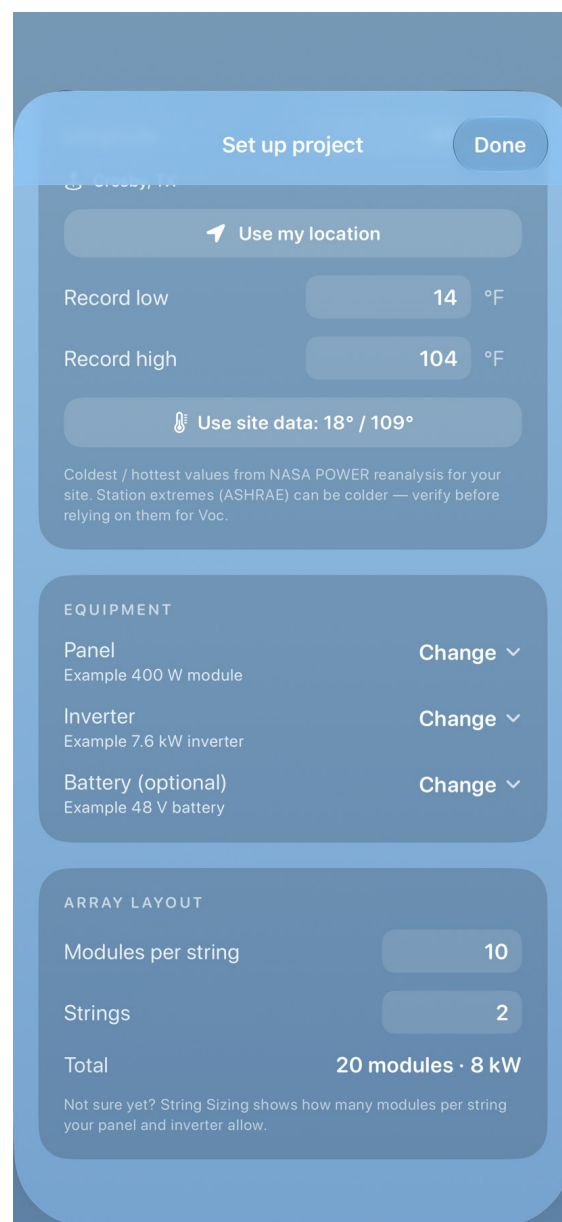
Read the tracking or heading note. Improve light and surface visibility, avoid magnetic interference, or use typed measurements. Mac has no camera-measuring workflow.

A measurement did not transfer

Confirm the correct active project and use the specific Apply, Use or Send button. Saved calculation entries alone are not a command to change another tool's inputs.

Another device looks different

Check iCloud status and relaunch after changing sync settings. Select the project on that device; active-project selection and units do not sync.



iPhone · Troubleshooting
Actual app view; example data.

For help, use the app's Help entry on Mac. Describe the tool, inputs, units, device and exact message, and include a screenshot without private client details.

REFERENCE

Glossary and input conventions

Power and energy

W / kW: instantaneous power; 1 kW = 1,000 W.

Wh / kWh: energy used or produced over time.

Ah: battery charge capacity; energy also depends on voltage.

Module ratings

STC: standard test conditions for module nameplate ratings.

Voc: open-circuit voltage.

Vmp: voltage at maximum power.

Isc: short-circuit current.

Imp: current at maximum power.

System terms

String: modules connected in series.

MPPT: maximum power point tracking.

PWM: pulse-width modulation controller type.

DC:AC ratio: array DC nameplate power divided by inverter AC rating.

OCPD: overcurrent protective device.

Site and energy

Tilt: angle from level.

Azimuth: direction around the horizon; 180° is south.

GHI: global horizontal irradiance, used as climate input.

Albedo: ground reflectance.

Autonomy: planned storage duration without solar contribution.

Depth of discharge: usable fraction of nominal storage.

Entering fractions

Read the field suffix. A fraction-style input such as efficiency or derate uses 0.8 for 80%; a field with a percent sign expects its displayed percentage. A temperature coefficient is different again: use its %/°C value from the datasheet.

AWG and mm² describe wire size using different conventions. Changing the app's wire standard also selects different calculation methods.

REFERENCE

Field-to-report checklist

Before the visit

Create the project. Load actual equipment specifications. Set units and wire standard. Confirm offline reference data and access to the tools you need. Export important prior work before a handoff.

At the site

Confirm project and site identity. Capture location, orientation and dimensions. Record obstruction geometry, routed cable length and available working space where relevant. Read tracking and measurement-quality messages.

During sizing

Resolve missing setup inputs. Check string voltage and current separately. Review wiring conditions and protection inputs. Reconcile roof-fit count with electrical layout. Use the correct climate and design-month assumptions.

Before the client report

Read every failed, provisional and not-checked item. Check saved calculations for changed inputs. Confirm production and financial assumptions. Verify company branding, paper size and units.

At handoff

Generate the PDF from the final project. Export the .sunsizer file if another person needs editable work. Confirm the intended recipient and keep the final report with the project record.

The app supports calculation and documentation. Final installation decisions require the equipment instructions and applicable professional review.

EDITION & COVERAGE

About this manual

Edition

Sun Sizer Pro 1.1 user manual, prepared October 8, 2026 from the supplied project source, including the revised setup and check-summary workflows. This guide documents that project version; it does not assert which build is currently published in the App Store.

Screenshot provenance

Real app views were captured from a separate documentation build on iPhone and iPad simulators and from the Mac Catalyst app on macOS. A fictional Oak House project uses example 400 W modules, a 7.6 kW inverter and a 48 V battery. Screens use sample/default inputs for teaching, not a completed installation design.

Camera illustrations

The roof, obstruction, route and clearance scenes are AI-generated mockups created with the built-in image-generation tool. Gold annotations illustrate measurement geometry. The shading point order matches the app: array, obstruction base, obstruction top. No camera accuracy test was performed.

Coverage

All 16 calculation/measurement tools, Equipment Library and Projects are covered, along with setup, check labels, PDF and project-file export, units, branding, sync, access and troubleshooting. Sensor behavior requires physical supported hardware.

Reference information

Behavior and control names were checked against the supplied application source. The app identifies its climate data as NASA POWER and its offline place names as GeoNames. See Settings > Reference data for credits and license information. This is a software-use guide, not a substitute for the cited electrical standards.

Questions about a particular result are easiest to resolve with the project inputs, selected units, equipment specifications and the exact screen message.