INDEPENDENT USER GUIDE

Using STS AirConAssist on a real job

A field companion for room cooling estimates and one-, two- or three-room split/multi split planning. It shows how to collect the room, fabric, solar and equipment evidence, compare delivered capacity, and save a preliminary working note.

Open the app: https://airconassist.staffstraining.co.uk

Before you begin

- Complete the contact form if prompted. Marketing is optional. Use a clear job reference and site name.
- Make a dated room sketch and photograph relevant windows, shading and unit routes. Ask the client about occupancy, cooking and heat-producing equipment.
- Treat the quick screen and survey worksheet as preliminary alternatives. Neither includes every load component or chooses an exact unit.

Find the information before entering it

App field	Source or method
Length, width, height, occupants	Measure internal dimensions and ceiling height; ask about regular people at the chosen design hour.
Sun exposure and cooking	Inspect glazing, orientation and shading; ask about room use. These are broad quick-screen choices.
Indoor and outdoor design °C	Agree indoor condition; use suitable local design-weather data and record the chosen hour/basis. The app defaults are editable, not evidence.
Exposed wall/roof area and U-values	Measure surfaces adjacent to outside/relevant hotter spaces; obtain fabric values from as-built records, product data or justified assessment. Wall area entered includes glazing; the app deducts it.

App field	Source or method
Glazing, g-value, incident solar, shade	Measure glazing; use product data for U and g. Obtain incident design-hour solar from a suitable design source, then establish shading. The orientation dropdown records only a note.
People, equipment, outside air	Document sensible gain assumption and actual equipment/use. Enter only outside air in m^3/h, not recirculated room air.
Indoor/outdoor delivered kW and compatibility	Use current manufacturer combination and performance data at the intended conditions, including correction factors, pipe lengths and height limits. Nominal class alone is insufficient.

Step 1 Rooms

Enter the job reference and site, then name each room. Add up to three rooms and enter length, width, ceiling height, regular occupants, sun and kitchen use. Each added room represents an indoor unit. The live quick figure is a screen; check measurements and do not treat the common size class as a selected model.

Step 2 Cooling loads

For each room, choose Quick screen or Survey worksheet. In Survey, enter a source-backed value for every numeric field, including zero where genuinely absent. Wall area must be at least glazing area. Review the seven sensible components and compare with the quick figure. Investigate a material difference rather than adding the two methods together.

Practice job: Bedroom 4 × 3 × 2.4 m, two occupants, typical sun: quick screen 0.74 kW. Home office 5 × 4 × 2.4 m, two occupants, sunny: quick screen 1.37 kW. A fuller classroom survey with documented mock fabric and solar inputs in the STS tutor worked example gives 0.55 and 1.06 kW sensible estimates. These are teaching values, not a real cooling design.

Step 3 System check

Enter each exact indoor model and its delivered cooling with the proposed combination at design conditions. Enter outdoor manufacturer/model, nominal rating for reference, and delivered simultaneous capacity with the selected rooms operating. Check indoor loads individually and the combined estimate against the simultaneous outdoor value. Tick each manufacturer-evidence box only after confirming permitted pairing, pipe/height limits and performance. Record document revision/table, assumptions and unresolved items in notes.

Step 4 Report and later use

Review the job report, then Print report / save PDF. Tap Save job to keep it on this device and Saved jobs to reopen it. Export JSON as a separate backup before changing devices or clearing browser storage; saved jobs are not a central account. After the first connected load, the app can work offline on the same device. A saved report records inputs and arithmetic, not a certified equipment selection.

Take-away checklist

- Retain a room sketch, measurements, window and fabric evidence, orientation, use and design-weather basis.
- Check latent gains, infiltration, thermal mass and solar timing outside this simple sensible worksheet.
- Keep the exact manufacturer combination and corrected delivered performance evidence with the report.
- Do not order equipment from the common size class or the app status alone.

Further reference

CIBSE Guide A Environmental design: https://www.cibse.org/knowledge-research/knowledge-portal/guide-a-environmental-design-2015-updated-2021-pdf

CIBSE cooling-load algorithm appendix: https://www.cibse.org/media/ijrpevoq/appendix-5-a10-algorithm-for-the-calculation-of-cooling-loads-updated.pdf