This is a Quick Reference guide to assist you to perform a audit. A full training manual is available for more detailed information about airINSITE. Support animations are available on the airINSITE Support page.

Before you start:

- Ensure your user settings are correct
- Clear your cache on a regular basis or when noticed by e-mail
- Use Google Chrome as your web browser

Follow the following steps

1. CREATE AUDIT IN AUDIT WIZARD
2. BASE TO CLOUD
3. BASE TO LOGGERS - ARM LOGGERS
4. CONNECT LOGGERS
5. CHECK RED LED TO ENSURE LOGGERS ARE CONNECTED PROPERLY
6. DISCONNECT LOGGERS
7. LOGGERS TO BASE
8. BASE TO CLOUD
9. ACTIVATE AUDIT IN CLOUD
10. ANALYSE AUDIT USING GRAPH CHART SIMULATION WIZARD

FREQUENTLY ASKED QUESTIONS   **PAGE 9-11**

Welcome to
Air-insite web application

WIZARDS

Audit Wizard

Chart wizard
Analyse equipment and system utilisation, power, output and performance metrics

Graph wizard
Visualise logged amps, volts, real kW, power factor, dew point, pressure, flow, cost, temperature

Simulation wizard
Simulate alternative supply and demand side equipment and system control scenarios and establish the resulting energy, cost and CO2 benefits

Publish wizard

MY STUFF

USER ADMIN
Home

- manage audits
- manage compressor tables

PERSONAL

- user information
- manage data

INFO

Contact administrator

Get product support

About this web application

Update news

Last release: 26/02/2014
Please clear browsercache if you haven't done this for this release.

1.   CREATE AUDIT IN AUDIT WIZARD

Here you configure your audit:
Audit Wizard Step 1
Site and contact details
Audit Wizard Step 2
Which base station and loggers are you going to use
Which C&V loggers will be connected to which compressor
Link C&V loggers with compressor table(s)
Which pressure/flow loggers are system pressure/flow
Audit Wizard Step 3
Enter energy cost
Select/Enter Receiver volume
Enter number of hours the factory will be on shutdown during a year (do not include weekends if weekend is already included in your audit period)
(apart from the quantity of loggers we can change the configuration details at any stage once the configuration has been created and saved)
Audit Wizard Step 4
The audit is now saved and is ready for a Cloud to Base Transfer.
Print off the Audit Configuration PDF so you know which loggers have to be connected to which compressor or location)
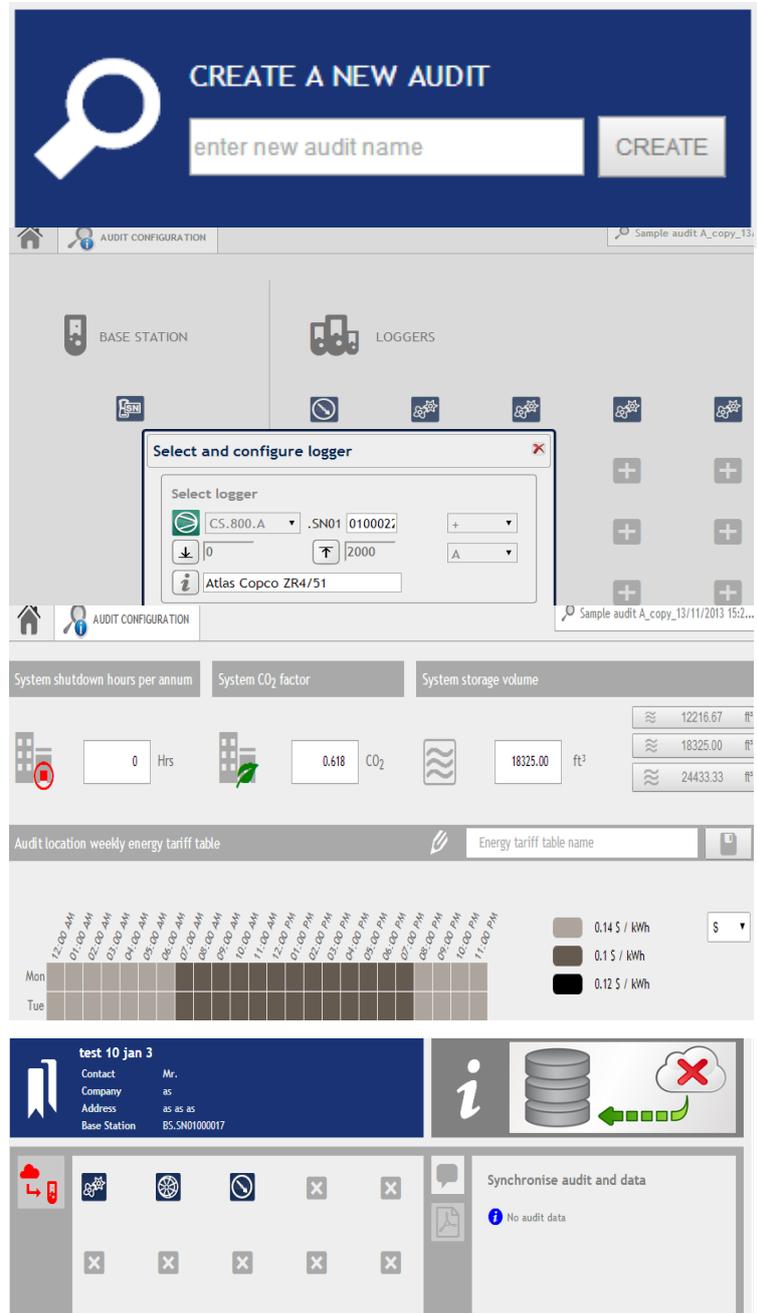
2.   BASE TO CLOUD

Start up your Base Station - connect it to the Internet – Select the Cloud to Base action on your Base Station

3.   BASE TO LOGGERS - ARM LOGGERS

Select the audit on your base station (the name of the 'active' or 'selected' audit will be show at the top)
Select 'Base to Loggers' – you will see the loggers associated with the audit
Activate the Bluetooth Button on your loggers.
Wait till all loggers will have a green tick on your Base Station Screen.
(Note that Arming loggers will remove all existing recorded data from your loggers and can no longer be recovered)

4.   CONNECT LOGGERS

Once armed connect your loggers within 2 days to the compressor system as intended.
Make sure you read the Configuration PDF so the right loggers are connected to the right compressors or location.
Take care off all Health & Safety precautions
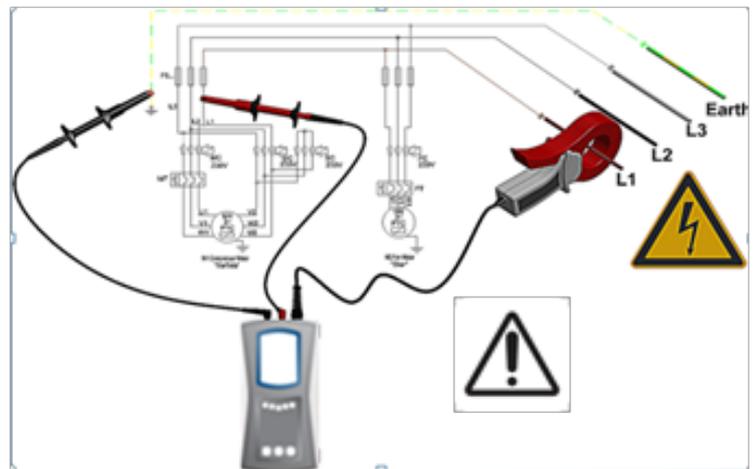
5.   CHECK RED LED TO ENSURE LOGGERS ARE CONNECTED PROPERLY

Once fitted and the system is switched on ie all compressors are on-line, press the RED led button to ensure the loggers receive data and are installed properly - consult manual or the PDF configuration file for the correct flashing sequence.

All data loggers except current and volt logger…

Fast flash - Configured, sensing valid data
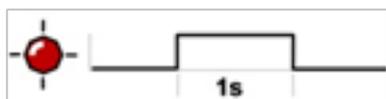
Slow flash - Not configured - Not Armed

Current and volt logger only…
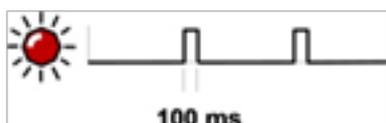
Fast flash - Configured, sensing current data, sensing voltage data

Fast flash - Configured, not sensing data

Current and volt logger only…

Fast flash - Configured, sensing current data, sensing voltage data

Current and volt logger only…
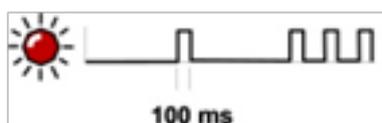
Fast flash - Configured, not sensing valid data

6. DISCONNECT LOGGERS

Take care off all Health and Safety Precautions
Transfer the Data to the Base Station as soon as possible.

7. LOGGERS TO BASE

Start the base station and activate/select the correct audit.
Enter the 'Loggers to Base' menu.
Click on the Blue LED – Bluetooth buttons on the loggers (no more then 4 at a time). Wait until all the logger icons get a green tick. If a red cross appears then repeat the process for that particular logger, until it gets a green tick
When all data as been received and all loggers have received a green tick on the base station you can proceed to transfer the data to the Cloud.

8. BASE TO CLOUD

Start the Base Station and connect the unit to the internet.
Active/Select the audit you wish to upload to the cloud (if not already selected – top of the screen)
Select 'Base to cloud'
When completed you will see a green tick appear. If the process is interrupted, please try again.
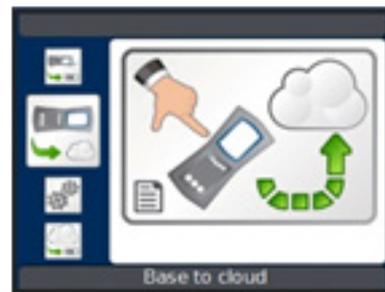
9. ACTIVATE AUDIT IN CLOUD

Go to the cloud www.air-insite.com
Select the audit wizard and open the audit.
This will trigger the activation of the uploaded data – the raw data is being processed to enable the graph wizard, chart wizard and simulation wizard to use the data properly.
The Icons on the left are Red if they actions has not been completed, Green if the actions have been completed.
(Cloud to Base   - Base to Cloud   - Data Synced)
(If you make any changes to the audit configuration after this point you must always click the 're-sync' button in audit wizard step 4. - this will Re-process the raw data taking into account the new configuration data – This is not done automatically!!)
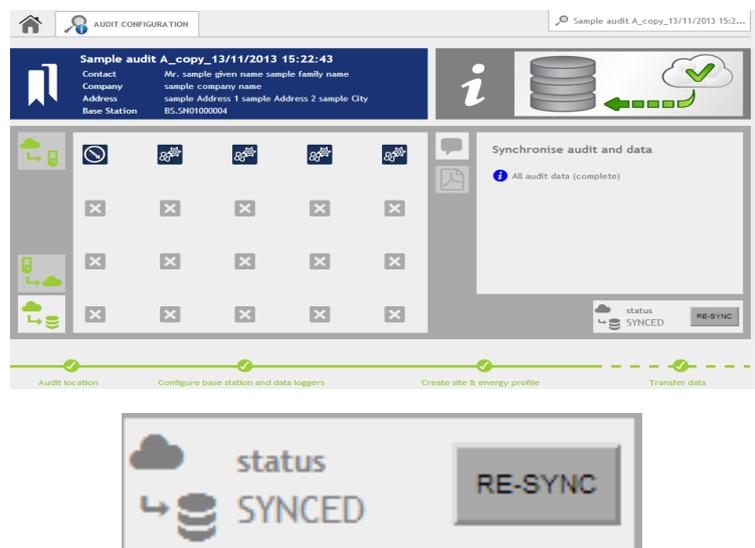
10.   ANALYSE AUDIT USING GRAPH CHART SIMULATION WIZARD

ANALYSE THE DATA IN GRAPH WIZARD

Important: YOU MUST SET THE APPROPRIATE START AND END TIME
first open a detailed graph, select all compressors and the Amps. Plot the graph. Determine the appropriate start and end time. Open the 'Edit Audit start & end time' window and set the appropriate start and end point. Usually when you switch the system back on when the loggers have been installed and just before you switch the system off to disconnect the loggers.

If you don't do this your chart/simulation data will be incomplete/inaccurate. As soon as you arm the loggers if will start recording until you perform the 'loggers to base' process. You need to 'cut' out the time between arming and installation and 'cut' out the time from disconnection to 'logger to base'. If you don't this will be counted at 'Stopped hours' and will corrupt the Productive time, Unproductive time and Stopped time.

Ensure that the status of the compressors are correct and as you would expect.
Status = Load, Off-load or Stopped.   This will effect the calculated supply flow.
Incorrect status can be caused by incorrect configuration of the audit wizard eg compressor table or compressor configuration.

Standard Graphs are available
1.   System Energy
2.   Productive Input
3.   System CO2
4.   System Efficiency
5.   Flow, Pressure and Status Combo
6.   Power and Flow Combo
7.   Flow Power and Cost Combo
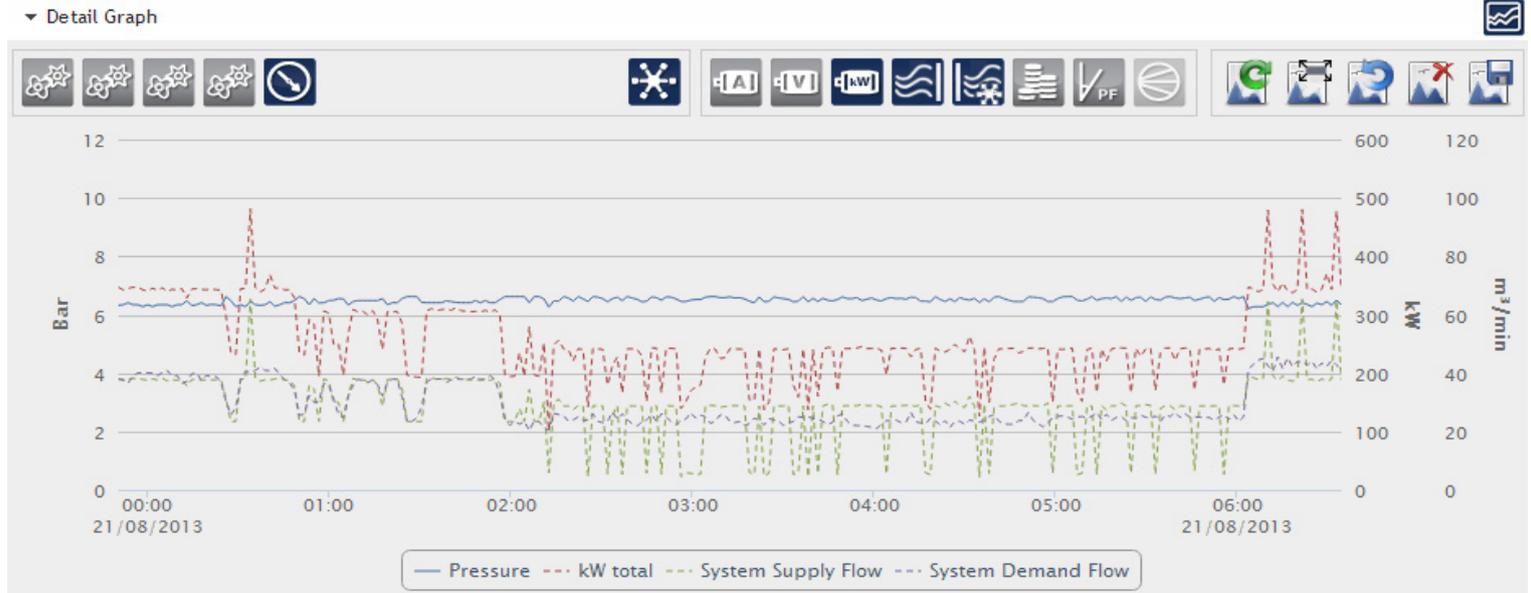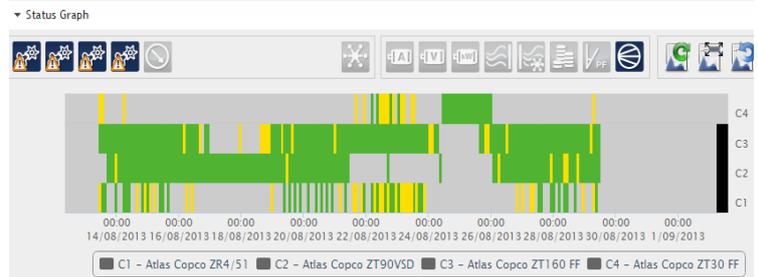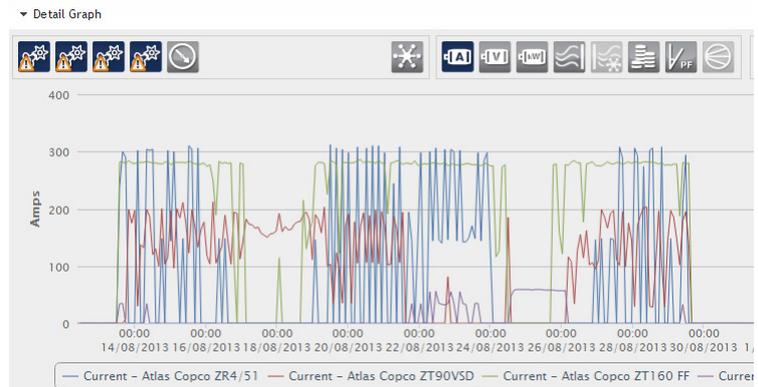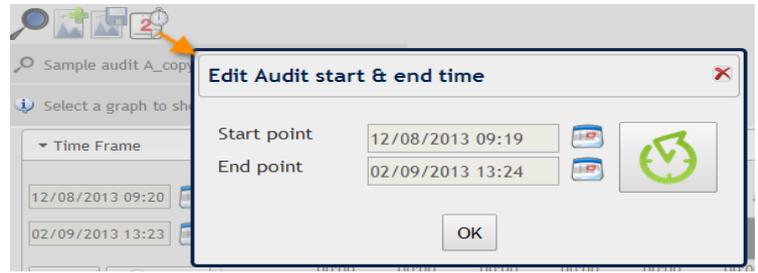
ANALYSE THE DATA IN CHART WIZARD

Important: YOU MUST SET THE APPROPRIATE START AND END TIME

first open a detailed graph, select all compressors and the Amps. Plot the graph. Determine the appropriate start and end time. Open the 'Edit Audit start & end time' window and set the appropriate start and end point. Usually when you switch the system back on when the loggers have been installed and just before you switch the system off to disconnect the loggers.

If you don't do this your chart/simulation data will be incomplete/inaccurate. As soon as you arm the loggers if will start recording until you perform the 'loggers to base' process. You need to 'cut' out the time between arming and installation and 'cut' out the time from disconnection to 'logger to base'. If you don't this will be counted at 'Stopped hours' and will corrupt the Productive time, Unproductive time and Stopped time.

Air-INSITE offers 8 pre-defined charts
1. Equipment Utilisation
2. System Power and Output
3. Equipment Output Analysis
4. Equipment Power Analysis
5. Performance KPI
6. Annual Cost Asset
7. Annual Cost Flow
8. System Pressure

Equipment utilisation

Air compressor nickname	Air compressor brand ID	Air compressor model ID	Loaded HRS	Loaded %	Offload HRS	Offload %	Stopped HRS	Stopped %
ZR4/51	Sample Audit	A	2d 21h 6m	13.6	3d 0h 18m	14.23	15d 6h 37m	72.16
ZT90 VSD	Sample Audit	A	10d 14h 53m	50.17	0d 19h 50m	3.91	9d 17h 19m	45.92
ZT160 FF	Sample Audit	A	12d 4h 10m	57.51	1d 0h 17m	4.78	7d 23h 34m	37.71
ZT30 FF	Sample Audit	A	1d 20h 8m	8.69	1d 3h 44m	5.46	18d 4h 9m	85.85
System utilisation			15d 22h 12m	75.23	0d 4h 43m	0.93	5d 1h 7m	23.84

Performance KPI

Air compressor nickname	Air compressor brand ID	Air compressor model ID	Total kW HRS	Output ft³	Productive HRS	Productive energy kW HRS	Non-productive HRS	Non-productive energy kW HRS	Specific efficiency kW/m³	Cost efficiency $/m³	Cost $
ZR4/51	Sample Audit	A	15701.6	4205818.56	2d 21h 6m	12612.6	3d 0h 18m	3094.3	0	0.69	1814.55
ZT90 VSD	Sample Audit	A	25237.3	5298573.21	10d 14h 53m	24898.7	0d 19h 50m	342.6	0	1.23	2994.17
ZT160 FF	Sample Audit	A	52882.5	14435353.45	12d 4h 10m	51206.8	1d 0h 17m	1679.4	0	0.87	6274.40
ZT30 FF	Sample Audit	A	1736.1	407531.1	1d 20h 8m	1448.8	1d 3h 44m	287.3	0	0.91	206.93
System			95557.4	24347276.32	15d 22h 12m	90166.9	0d 4h 43m	5403.6	0.004	0.016	11290.06

CREATE SIMULATION SCENARIOS IN SIMULATION WIZARD

You can create simulations with or without an actual audit data.

Simulate various equipment scenarios, target pressure and system management scenarios against the customers current systems.

Compare the efficiency, energy cost savings and CO2 output savings.

This is an excellent sales tool to visualise savings of proposed variants versus existing/audited system.

- Supply side calculated flow
- Demand side calculated flow - Requires System Pressure audit data using pressure logger
- System measured flow - Requires System Flow audit data using flow logger
- System incl flow control (North America only at this stage)

8760		kW	kW		12	12
0						
2087						
82		46.2	24.32	21.9	1794.2	215.30
459	0.5 - 7.3	148.3	28.2	120.1	55125.9	6615.11
823	7.4 - 14.6	365.6	62.7	302.9	249287	29914.40
454	14.7 - 21.9	550.0	180.0	370.0	167980	20157.60
1340	22.0 - 29.3	735.9	674.4	61.5	82410.0	9889.20
1750	29.4 - 36.6	934.7	390.9	543.8	951650	114198.00
745	36.7 - 43.9	1227.2	653.9	573.3	427109	51253.02
334	44.0 - 51.3	1509.9	810.0	699.9	233767	28051.99
630	51.4 - 58.6	1772.0	781.3	990.7	624141	74896.92
56	58.7 - 65.9	1960.8	970.8	990.0	55440.0	6652.80
0	66.0 - 73.3	2151.3				

5889013.3 kW   3040310.44 kW   You will save: 2848703 kW hours, $ 341844.34 1760498.39 lbs/CO₂ per year

CREATE REPORTS USING PUBLISH WIZARD
Use the publish wizard to bring together saved graphs,
charts or simulations and create your report/proposal on
line.

This module is undergoing a major upgrade to be released
in Spring 2014

FREQUENTLY ASKED QUESTIONS

Wizard	Question	Answer
Audit	Loggers are not retained in step 2	Ensure you use Google Chrome as your internet browser. This is the preferred system as others do show anomalies
Audit	Current and Volt loggers, unable to open a compressor table	When you create a private compressor table ensure you have entered al field and especially logical flow output
Audit	Not reaching 100% in step 4 after base to cloud	Not reaching a 100% means that the system has not been able to complete all calculations satisfactory due to missing or illogical information. Normally of you reach between 90% - 99% often the data is the compressor table has been incorrect. Please look at all the compressor tables that you have created or attached and ensure that the flow output is entered correctly, the nominal, maximum and offload power figures is logical and you have chosen the correct type of compressor(s). Reaching less the 90% often means that one of the loggers has failed to measure data or the "Logger to base" or "Base to Cloud" transfer has somehow failed. First perform a "Base to Cloud", recalculate. If you are still unable to see 100%, please recreate a new audit with simular configuration. Perform "Cloud to Base" , "Logger to Base" and finally "Base to Cloud" for this newly created copy of the audit. DO NOT RE-ARM LOGGERS, SO DONOT PERFORM A "BASE TO LOGGERS" ACTION. If you still donnot get a 100% now some data on the loggers is most likely corrupted
Base Station	"Base to Loggers" Not getting a green tick	If not all loggers get a green tick, please keep trying. Wait until the blue Bluetooth led light stops flashing and then press the Blue Tooth Button again. If it still fails, wait till the blue led light has stopped flasing, go back to the main menu, then renter the Base to Loggers Menu and retry the transfer process for the failed logger only.
Base Station	"Loggers to Base" Not getting a green tick	If not all loggers get a green tick, please keep trying. Wait until the blue Bluetooth led light stops flashing and then press the Blue Tooth Button again. If it still fails, wait till the blue led light has stopped flasing, go back to the main menu, then renter the Loggers to Base Menu and retry the transfer process for the failed logger only.
Base Station	"Connection error"	"Please ensure the base station is connected properly to your Internet Router or Network. Ensure there is a proper functioning Internet connection. Ensure the settings are correct for the type of connection you are using. AIRINSITE™ base stations use conventional DHCP or manual IP configuration methods. The manufacturers do not provide support relating to the use of ancillary products such as WIFI dongles. Network security restrictions may prevent the AIRINSITE™ base station from accessing the internet If you experience internet connection difficulties, contact your local IT administrator in the first instance!"
Base Station	Does logger data remain on the base station?	The base station is not a memory/storage device. It is a bridge between loggers and the cloud/internet server to enable to transfer data from loggers to the right area on the airINSITE Cloud database. It is important to transfer the data as soon as possible from the Base Station to the cloud to avoid loss of data. The way that the Base Station Memory is managed is that it has enough allocated memory for 25 audits with a maximum of 20 loggers per audit. It mamanges spave by only storing data for 1 particular logger at the time. When you re-use the same logger for a second audit, It will overwrite the data of that specific logger as soon as you transfer its data to the base station. In other words it only stores 1 file per specific serial number(logger).
Base Station	How do I know which audit is active on my base station?	The audit name of a selected (active) audit is always appearing at the top of the screen on your base station. You can change/set active audits in the audit manager menu on your base station. Select the audit you need to arm loggers for, perform a logger to base or Base to Cloud for.
Base Station	New Audits do not appear on the Base Station	The base station can only hold 25 audits. After completion of an audit, audits do not automatically get deleted from your base station. You need to delete completed or irrelevant audits from your base station manually, using the Audit Manager on your base station

Wizard	Question	Answer
Graph	Can not see a Demand Flow Profile	Ensure you have done the following: 1. Measured Pressure and nominated 1 pressure logger as "System Pressure" in the step 2 audit configuration. 2. Entered the Receiver/tank volume and pressed the save button (step 3 audit configuration) 3. recalculate the audit in step 4
Graph	Can not see a Real Measured Flow Profile	Ensure you have done the following: 1. Measured Flow using the Flow logger and nominated 1 flow logger as "System Flow" in the step 2 audit configuration.
Graph	Can not see a Supply Flow Profile	Create a Status graph and a detailed graph for Current and Kw. Look at the status of the compressor(s). When it says off-load when you expect loaded, then examine the reason for it! When system states that a compressor is Off-Load the calculated flow is 0. Often it is caused by poor/incorrect data in the Compressor Tables. Look at the logic of Off Load Kw, Actual Kw, Total Package Kw, Power Factors etc.
Logger	Blue LED light remains solid or Blue LED light keeps flasing continuously	"If the blue light remains solid for longer then 5 minutes, the bluetooth connection is malfunctioning. It either hangs and its not terminating a connection. Try first to exit the transfer menu on your base station. Going back to the main menu does terminate a connection in most instances. The Blue LED light will go out after a minute. If it doesn't a reboot of the logger will be required. If the LED lights keeps flasing after 10 minutes are so with no obvious change on your base station, it means a malfunctioning of the Bluetooth connection. Again first try to exit the transfer menu of your base station. the LED light should stop flashing. If it doesnt a reboot is required. TO REBOOT THE LOGGER FOLLOW THE FOLLOWING STEPS: Press status button shortly (red blinking led) Press same button for full five seconds (red led on continuously after 5 seconds) Now push Bluetooth button shortly Now both led's on for 2 seconds indicating reboot If even that fails remove all batteries for at least a minute and then put them back in again"
Logger	Flow Logger not recording	Make sure the flow logger is plugged in to a electrical socket
Logger	Flow Logger results showing expected flow rates	Please ensure you have fitted the logger correctly according to the manual. Take into account straight pipe requirements, ensure the flow sensor is exactly in the middle of the pipe, measure point location (distance from receiver, branched out etc, entered the correct inner pipe diameter in the audit configuration. The material the pipe is made of can also make a huge difference. airINSITE is converting measured data based on the assumption that the pipe is made of steel. Aluminium or plastic pipes will have a different behaviour. this is currently not taken into account.
Logger	How do I know if my sensors are correctly installed and sensing data?	The Red LED light displays the status of the logger by certain flashing sequences. The manual describes all flashing sequences, and so does the last page of the audit configuration PDF print. Please always check the status after installing the loggers
Logger	When does the logger start recording?	As soon as you arm the logger by initiating the "Base to Logger" process. Same (zero) values will be compressed to ensure that memory space is not wasted). The recording stops when you perform a "logger to base" process. You need to cut away the period before and after installation in the cloud to ensure only relevant data is shown in your charts and Simulation wizards
Logger	Is recorded data stored on my logger? And how long does it remain in the loggers memory	The loggers can only store one recording at once. The data will remain in the loggers memory until you rearm the logger for a new audit, by performing a "Base to Logger" action. This action clears the loggers memory and resets the time stamp/clock

Wizard	Question	Answer
Logger	Lost my audit data in my loggers memory	The loggers can only store one recording at once. The data will remain in the loggers memory until you rearm the logger for a new audit, by performing a "Base to Logger" action. This action clears the loggers memory and resets the time stamp/clock
Logger	I performed a Base to Logger process. Can I retrieve my audit data from a previous audit?	No. The loggers can only store one recording at once. The data will remain in the loggers memory until you rearm the logger for a new audit, by performing a "Base to Logger" action. This action clears the loggers memory and resets the time stamp/clock. If you have performed a "Logger to Base" process for that particular audit, the data is stored in the base station against this particular audit only.
Logger	The standard supplied probes are not suitable for all compressors. Can I use alternatives	Yes, you can source any probe you wish, such as a banana probe or magnetic probes. We can recommend that you carry more then 1 type of probes to ensure you can make a secure conection no mattter the compressor. We can recommend FLUKE (www.fluke.com), but any local electrical retailer would be able to supply probes
Simulation	Can not see a Demand Flow Profile	Ensure you have done the following: 1. Measured Pressure and nominated 1 pressure logger as "System Pressure" in the step 2 audit configuration. 2. Entered the Receiver/tank volume and pressed the save button (step 3 audit configuration) 3. recalculate the audit in step 4
Simulation	Can not see a Real Measured Flow Profile	Ensure you have done the following: 1. Measured Flow using the Flow logger and nominated 1 flow logger as "System Flow" in the step 2 audit configuration.
Simulation	Why do I need to change target pressures manually when I have measured system pressure?	Measured pressure is not yet taken into account in the simulation wizard. The simulation wizard imports all audit data such as Kw, productive, non productive hours and calculated flow (real measured flow if that has been measured). The wizard allows you to simulate what happens if you change target pressures both on the current installation as well as the proposed managed installation.
Simulation	Can I create more then 1 simulation	Within reason you can create as many simulations per audit as you wish. You can easily compare the results of each simulation.
Simulation	Does the simulation use measured data	Yes, the simulation uses the recorded KW measurements. It will use the data from the compressor tables to calculate flow profile. It will use that profile to simulate results for your proposed compressor(s). Remember it is a simulation. There are many factors that can influence actaul savings versus projected savings.
Simulation	I try to print my Simulations to PDF but nothing happens.	Check your Browser settings that they allow Pop-Ups from www.air-insite.com. In Chrome select settings Advanced Settings, privacy settings, Contents Settings, Pop-Ups, allow all pop ups or create an exception
Simulation	Can not see a Supply Flow Profile	Create a Status graph and a detailed graph for Current and Kw. Look at the status of the compressor(s). When it says off-load when you expect loaded, then examine the reason for it! When system states that a compressor is Off-Load the calculated flow is 0. Often it is caused by poor/incorrect data in the Compressor Tables. Look at the logic of Off Load Kw, Actual Kw, Total Package Kw, Power Factors etc.