

ArraySight Manual 1.13 en







Notes on document version

All previous versions of this document are hereby no longer valid.

Version 1.13:

New battery compartment in housing drawings. Refer to: ⇒ Chapter 3 "Startup" on page 8.

ArraySight sets added. Refer to:

 \Rightarrow Chapter 1 "d&b ArraySight" on page 5.

General information

ArraySight Manual

Version: 1.13 en, 05/2025, D2735.EN .01

Copyright © 2025 by d&b audiotechnik GmbH & Co. KG; all rights reserved.

Keep this document with the product or in a safe place so that it is available for future reference.

We recommend you to regularly check the d&b website for the latest version of this document.

When reselling this product, hand over this document to the new owner.

If you supply d&b products, please draw the attention of your customers to this document. Enclose the relevant documents with the systems. If you require additional documents for this purpose, you can order them from d&b.

d&b audiotechnik GmbH & Co. KG Eugen-Adolff-Str. 134, D-71522 Backnang, Germany T +49-7191-9669-0, F +49-7191-95 00 00



WARNING! Potential risk of damage to the eyes.

Laser class 3R, 532 nm, <5 mW: Do not suppress eye-closure reflex.

The d&b ArraySight sender unit is shipped with the following label affixed to the top surface. Do not remove this label under any circumstances.



The high brightness laser of the sender unit requires additional safety considerations.

Please give careful attention to the following safety warnings before using the d&b ArraySight inclinometer system.

NEVER look directly into the laser, even when it is switched off, as someone may activate it without warning you.

WARN others in the venue that you are going to use a laser and move them away from the target area before activating a laser.

ENSURE that others do not enter the target area of the laser while it is in use.

ENSURE that the meter unit is to hand at all times so that the beam can be switched off immediately if necessary.

ALWAYS use the laser for the minimum amount of time possible. You can carry out most of the alignment procedure with the laser turned off.

Disconnect the cable from the meter unit once the measurements had been made.

ALWAYS ensure that the meter unit is disconnected when the public have access to the venue.

NEVER leave the laser turned on while unattended.

NEVER use the laser in any other application than it is intended for.

Operational safety

The d&b ArraySight inclinometer system is an integrated part of the d&b rigging system and should be regarded with the same respect as any other rigging component.

The sender unit must be safely mounted to the corresponding flying frame when used above 2 m (6.6 ft) from ground level using the enclosed fixing screws.

DO NOT fix the sender unit with tape or velcro.

When making adjustments to the array with motor hoists, watch the hoist - not the meter unit! Check the measurement only when the hoist has finished moving.

When using the meter unit, be aware of other rigging operations taking place around you. Always follow the appropriate safety procedures (including wearing the appropriate personal protective equipment). The sender unit is weather/water resistant (IP54), enabling it to withstand dust ingress and rain, although the limited ingress of water may be possible. It is therefore advisable to take account of prevailing weather and environmental conditions and take precautions to protect the sender unit.

As with any rigging components, regular safety inspections are obligatory.

1	d&b ArraySight	5
1.1	Scope of supply	5
1.2	Intended use	5
2	Technical specifications	7
3	Startup	8
3.1	Inserting or replacing the batteries	8
3.2	Connecting the units	8
3.3	Switching on/switching off	9
3.4	User interface of the meter unit	9
3.5	The menu structure	10
3.5.	1 Home screen	10
3.5.	2 Main menu «Menu»	10
3.5.	3 Meter settings	10
3.5.	4 Sender settings	11
3.5.	4.1 Editing IP and Remote ID settings	12
4	Resetting the angle (zeroing) and laser	
4 1	alignment	13
4.1	Alimin the large (zeroing)	13 14
4.Z		14
5	Using the system	10
J.1 5 つ	Measurement limite	10 14
J.Z	Adjusting angles using relative values	10 14
5.0	Light the laser	10
5.5	Application example	יי 17
5.5 6	OCA integration (Ethernot)	1 /
7	Maintonanco and caro	10
7 1	Cleaning	19
72	etherCON connector socket protection	19
7.3	Calibrating the accelerometer	20
7.4	Firmware	21
8	75710.xxx d&b ArraySight set	22
8.1	Z5710.002 Mounting instructions	22
9	Manufacturer's declarations	24
9.1	Declaration of conformity	24
9.2	WEEE Declaration (Disposal)	24
9.3	Licenses and Credits	25



1.1 Scope of supply

Before setting up the system, please verify the shipment for completeness and proper condition of the items.

If there is any sign of obvious damage, do not operate the units and contact your local dealer from whom you received the system.

Pos.	Pos. Qty. d&b Code Description		Description
	1	Z5762	ArraySight meter unit
Includir	ng:	•	
[1]	2	Z5712	ArraySight meter unit
[2]	2		ArraySight meter case
[3]	1	D2735.EN .01	ArraySight Manual

Pos.	Qty.	d&b Code	Description
	1	Z5761	ArraySight sender unit
Includir	ng:		
[1]	2	Z5711.001	ArraySight sender unit
[2]	2		2 x Fixing screws for each sender unit (Torx T20, M4 x 14 mm).
[3]	1	K6006.200.00	Shielded CAT5e 1:1 cable, 30 m (100 ft)
[4]	2	D2735.EN .01	ArraySight Manual

1.2 Intended use

The d&b ArraySight laser inclinometer system is intended to vertically aim an entire array in its operating position. It provides precision angle measurement over a wide measuring range of ± 90 degrees. The sender unit uses a 3-axis MEMS accelerometer for data acquisition. This provides accurate tilt sensing over one axis, even when the unit is tilted on another axis. Accurate angle measurements can be achieved, resolved to ± 0.1 degrees on the display of the meter unit.

The compact sender unit is housed in a weather resistant enclosure. It utilizes an ultra bright green laser to provide a visible indication for aiming the array, with a flashing mode to help locate the beam in bright surroundings.

The sender unit can be attached to dedicated d&b Flying frames. For this purpose, the sender unit has two threaded inserts on its base and comes with dedicated fixing screws (Torx T20, M4 x 14 mm).



Easy calibration

Multiple sender units can be used with one meter unit. Calibration information is stored in the sender unit using non-volatile memory, so it remains accurate after the meter unit is disconnected. Sender units can be reset on the fly to any angle within range, allowing adjustment of system elevation to be made in absolute values if required. Calibration is carried out via the meter unit's onscreen menu, without the need to dismantle units or use precision hardware.

Relative angle measurement

The meter unit's zero function means relative angle measurements can be made via the on-screen menu and the last four readings are stored for easy recall.

Intelligent interpolative measurement

It is possible to make accurate measurements, even before the system has reached its final resting angle after hoist adjustment. The meter unit automatically displays the final resting angle within three periods of oscillation. This reduces installation time, with no need to wait until the system comes to rest after each angle adjustment.

Temperature and humidity measurement

In addition, the sender unit incorporates a thermo- and hygrometer (sensor) to derive the actual onsite temperature and humidity.

Note: The sensor is calibrated by factory default and requires no re-calibration by the user.

The thermometer covers a range from 0 to 40 °C (32 to 104 °F) with an accuracy of ± 2 °C (± 3.6 °F) while the hygrometer covers the range of 10 to 100% (relative humidity) with an accuracy of ± 5 %.

The corresponding values are displayed on the «Home» screen of the meter unit or, when integrated into the d&b Remote network, the values can be read out within R1.

Environmental conditions

IP rating sender unit	IP54
Pollution degree	
Temperature range	0 °C to 40 °C (32 °F to 104 °F)
Humidity (rel.)	
Line	ear decrease to 50% @40 °C/104 °F
Altitude max:	
Power supply	
Meter unit	6 x AA Alkaline batteries - 9 VDC
	Not enclosed with the shipment.
Sender unit (single operation)	Derived from meter unit - 9 VDC
Sender unit (remote operation - OC/	A)Power over Ethernet (ETH/POE)
PoE standard specificationIE	EE802.3at or IEEE802.3af or 802.3bt
No passive inje	ector devices or switches must be used!
Laser specification	
Complies with 21 CFR 1040 with de and with IEC/EN 60825-1 (2001)	eviations pursuant to Laser Notice 50,
Laser	Class 3R laser product
Wavelength	
Max power:	less than 5 mW
Dimensions and weights	
Matarunit W/v H v F	$1.94 \times 14 \times 155 \text{ mm} / 105 \times 100 \text{ lb}$

		J + X + + X 100	11117 400	9 (0.7 10)
Sender unit	W x H x D: 42	7 x 45 x 112 r	mm / 295 g	(0.65 lb)

Inclinometer system

Measuring range	±45°@±0.1° (full accuracy)
	±90° @ ±1° (reduced accuracy)
Thermometer/Hy	/grometer (Sensor)
Range/Accuracy	0 to 40 °C (32 to 104 °F) / \pm 2 °C (3.6 °F)
Connections	
Meter unit	etherCON (RS232 - 19.2 kB/s)
Sender unit	POE enabled etherCON (RS232/Ethernet)
	Ethernet (OCA): 100 Mbit/Half-duplex
Cable type	Shielded CAT5e 1:1 cable
Cable length	
	Ethernet (OCA): Up to 100 m (328 ft)
Controls and indi	icators (Meter unit)
2 x Soft keys	
Display	Graphical LC display with backlight



* Note: Batteries are not enclosed with the shipment.



3.1 Inserting or replacing the batteries

NOTICE!

To power the ArraySight inclinometer system, professional high power **Alkaline** batteries (6 x AA - 1.5 VDC) must be used.

- 1. Undo the M2 screw at the back of the meter unit and remove the battery holder.
- 2. Remove the batteries from the battery holder.
- Insert the new batteries.
 Observe the correct polarity.
- 4. Reinsert the battery holder and redo the screw.

To preserve battery life, the meter unit is set to power down after one minute of inactivity by factory default. This can be adjusted in the \Rightarrow «Auto power» menu.

Note: Once the battery voltage drops below 7 V (approx. 33 %), the laser is switched off.

However, the meter unit remains operational and angle measurements are still possible.

3.2 Connecting the units

NOTICE!

Potential risk of malfunction and/or damaging to components!

The meter unit is not an Ethernet device!

DO NOT connect the meter unit to any Ethernet port or device such as Ethernet switches.

The meter unit is equipped with an RS232 interface and provides the power supply and communication for the direct connection of a single sender unit for read out.

Connect the sender unit to the meter unit using the enclosed, shielded **CAT5e 1:1** cable with etherCON connectors. For this purpose, the meter and sender units are equipped with corresponding etherCON connector sockets. Cable lengths of up to 30 m (100 ft) are allowed.

DO NOT use any cables other than specified above.







3.3 Switching on/switching off Please observe the "Safety precautions when using laser equipment!"

- 1. To switch on the meter unit, hold down both buttons below the screen.
 - The menu screen will illuminate and initially display the d&b logo. The unit will then switch to the «Home» screen and display the current angle readout.
- 2. Release both buttons.
- To switch off the meter unit (and the connected sender unit), proceed in the same manner until the «Shutting down» message is displayed.

3.4 User interface of the meter unit

The meter unit features a detailed graphical display with an intuitive on-screen menu system.

Navigation through the menus is by two buttons below the display.

Within the main menu and the submenus, the left-hand button is generally used to scroll down through the menu items ⇒ «SCROLL». The corresponding menu items are marked by an asterisk (₩).

The right-hand button is used to select a function \Rightarrow «SELECT».

Apart from that, the buttons have different functions within the various submenus. The current function is always indicated above each button (e.g. «BACK», SET, «CANCEL», «INC»...)

The display is backlit for viewing in all light conditions.



* Back * Back Meter setting Sender settir	enu Is Igs
SCROLL	SELECT

* Back History Auto poo Temp. ur	Meter Ver hit °C/°F	1/2
SCROLL		SELECT
* Version	Meter	2/2
SCROLL		SELECT

3.5 The menu structure

3.5.1 Home screen

The Home screen is split into three sections:

Header	Indicates the actual onsite temperature («T») and humidity («H») as well as the battery status in gaphic form and as a percentage value.
Read out	The current angle readout in degrees, relative to the last calibration of the unit.
Footer	From the Home screen, the following functions are accessible:
MENU	Left-hand button to enter the \Rightarrow Main menu «Menu».
LASER	Please observe the "Safety precautions when using laser equipment"! The right-hand button provides access to the laser function with the following options: On \Rightarrow Flash mode \Rightarrow Off Please also refer to \Rightarrow Chapter 5.4 "Using the laser" on page 17.

3.5.2 Main menu «Menu»

The main menu screen provides direct access to the:

\Rightarrow Meter settings

 \Rightarrow Sender settings

3.5.3 Meter settings

History	Displays the last four readings of the inclinometer. The readings are saved every time the unit is powered off, or when the sender unit is disconnected.
Auto power	Defines the auto power-off timer between 1 min. (default), 2 min. and 5 min.
Temp. unit °C/°F	Defines the temperature units.
Version	Displays the currently installed firmware version of both the meter and the sender units. If the sender unit is not connected, «Offline» will be displayed instead.

Sender 1/2 * Back IP settings Remote ID Reset angle	
SCROLL SELECT	
IP settings * Back IP: 192.168.0.111 SN: 255.255.255.0 GW: 192.168.0.1 Mode: Auto	
SCROLL SELECT	
	1
* Back Subnet: 64 Device ID: 12	
SCROLL SELECT	
	_
Sender 1/2 Back IP settings Remote ID * Reset angle	
SCROLL SELECT	
Sender 2/2 * Calibrate	

SELECT

3.5.4 Sender settings

IP settings	Defines the required IP settings such as the IP address ⇒ «IP», the Subnet ⇒ «SN», the Gateway ⇒ «GW» and the IP mode ⇒ «Mode».
	By factory default, the IP mode is set to «Auto» and is recommended for a network with a DHCP server present ⇒ DHCP+LL (Link Local). The IP mode can be set to «Manual» if required.

Remote ID	Defines the required «Remote ID» settings in connection with d&b R1.
	The «Remote ID» menu comprises two items, the «Subnet» and the «Device ID».
	Within an d&b OCA network, up to 100 subnets can be defined (values 0 to 99).
	Using the two digit Device ID for each subnet, you can define a total of 63 devices (values 1 to 63).
Reset angle (zeroing)	Saves an angle offset in the sender unit for relative measurements. When performed, the meter displays zero, when the sender unit is in its current position. The reset angle function is also used to ensure that the sender unit is correctly aligned to the flying frame (refer to \Rightarrow Chapter 4.1 "Resetting the angle (zeroing)" on page 13).
Calibrate	By factory default, the sender unit is already calibrated. However, for maintenance reasons it might be necessary to re-calibrate the sender unit's accelerometer. For this purpose, selecting «Calibrate» starts the calibration procedure for the connected sender unit as described in \Rightarrow Chapter 7.3 "Calibrating the accelerometer" on page 20.

SCROLL

3.5.4.1 Editing IP and Remote ID settings

Editing the IP and the Remote ID settings is performed in the same manner.

To edit the IP settings, proceed as follows:

1. Ensure the sender unit is connected.

become accessible again.

If the connection of the sender unit has been accidently interrupted, this will be detected by the meter unit within 5 seconds.
 The meter unit will then switch to the «Home» screen and a corresponding message will be issued.
 The «LASER» button and the sender settings menu will no longer be accessible.

After the interruption has been resolved, the meter unit will return to the Home screen. The «LASER» button and the sender settings menu will

- 2. Within the «Sender settings» menu, select the «IP settings» item to enter the «IP settings» menu.
- 3. Scroll to the desired item (e.g. IP) and press the «SELECT» button.

▶ The «Set IP» menu opens and the first digit is flashing.

- Use the «SCROLL» button to move through the digits. When a digit is marked, it starts flashing.
 Use the «INC» button to increment the selected digit by one.
- 5. Once the last digit is selected, the left-hand button changes from «SCROLL» to «SET».
- 6. Press the button to confirm your changes.
 - ▶ The meter unit switches back to the «IP settings» menu.

If no changes have been made, the meter unit switches directly back to the «IP settings» menu as soon as you scroll to the last digit.



IP settings Back * IP: 192.168.0.111 SN: 255.255.255.0 GW: 192.168.0.1	
SCROLL	SELECT
Set IP	
IP: 192.168.0.111	



INC

SCROLL





4.1 Resetting the angle (zeroing)

Preparation

- 1. With the flying frame resting on a solid, stable and flat surface, check the sender unit is correctly aligned.
- 2. Place a good quality spirit level, or calibrated digital level on the top edge of the flying frame as shown in the graphic opposite. You need to check that the top of the flying frame is truly horizontally **[x]** and vertically **[z]** leveled.
- 3. Fix the flying frame at the front or rear as required to ensure that it is perfectly aligned.
 - Once this is achieved, you can reset the angle of the sender unit as follows:

Resetting the angle

- 1. Switch on the connected meter unit and confirm that the initial display is showing **0.0**°.
- 2. Select «MENU» \Rightarrow «Sender settings» \Rightarrow «Reset angle».
- 3. Press «SET» to confirm the reset.
 - ^b The angle displayed, will be set to zero (0.0°) and the offset value is stored in the sender unit, even when it is disconnected from the meter unit.

Note: The angle needs to be reset for each sender unit in use. If you have sender units attached to a left and right array, when you plug the second sender unit in, you will need to reset this to zero, but if subsequently you reconnect the meter unit to the first sender unit at this location, the offset value stored in the sender unit is still valid.



4.2 Aligning the laser

Take precautions to prevent anyone from looking directly into the laser beam. Wear appropriate eye protection.

In normal use, the initial factory setup can be relied on, but if the unit is dropped or exposed to extreme temperatures, the laser may be realigned.

Correct alignment of the laser means the beam is emitted precisely on a central axis in relation to the case of the sender unit in both, the horizontal and vertical orientations.

- **Note:** It is recommended that you label the sender unit with the date and name of the person conducting the work so a record of the laser alignment is maintained.
- Small errors in alignment will multiply the further the laser is projected. It is therefore important to check the laser alignment from time to time and adjust it where necessary.
- This procedure should be carried out at base in a workshop, not on site.

It is essential for the sender unit to be accurately in position during the alignment procedure, both vertically and horizontally. To achieve this, place the Flying frame on a solid, stable and flat surface with a known level surface as described in the previous section (\Rightarrow Chapter 4.1 "Resetting the angle (zeroing)" on page 13).

- 1. Connect the sender unit to the meter unit so the laser can be operated.
- 2. You also require a vertical surface to project the laser onto, positioned at a distance of 10 m (33 ft) from the sender unit.



Tools required: <i>☆ Torx wrench #T10/120 mm (Ø 4 mm)

- 1. Switch on the laser and check where the laser dot falls on the vertical target surface.
- 2. Adjust the alignment of the laser using the three M3 machine screws around the circumference of the laser bezel.
 - The adjustment is quite sensitive, so make small adjustments to each in turn and make sure that any of the screws are not tightened completely.

The required accuracy is $\pm 5 \text{ mm} (\pm 0.2" \text{ hor./vert.})$ which leads to a maximum deviation of 10 cm/100 m (3.94"/328 ft).

- 3. Adjust the screws until the laser dot aligns precisely.
- 4. Switch the laser off and disconnect the sender unit.







5. Once alignment is complete, place a drop of thread-locking fluid on each of the screw heads to prevent loosening.

5.1 Measuring the angle

Once the array has been hoisted to its working height, ArraySight uses intelligent interpolating algorithms to determine the resting point of the array, while it is still moving after motor adjustment.

This is important because it means you can make accurate measurements without waiting for the system to come to a complete rest after adjustment. It typically takes around three periods of oscillation, or pendulum swings of the array for the sender unit to achieve an accurate measurement of the angle.

As a guideline, the angle display has the following accuracy:

Cycles	Accuracy
1 period of swing	±1.0
2 periods of swing	±0.5
3 periods of swing	±0.1

Clearly, the measurement cannot be relied upon when the motor hoists are actually in operation. Once the hoist(s) have stopped, the meter unit quickly resolves the measurement. A usable value for the resting angle is normally displayed within a few seconds.

5.2 Measurement limits

ArraySight has a usable range of $\pm 45^{\circ}$ with full accuracy. The sender unit sensor is capable of measuring angles up to $\pm 90^{\circ}$, but with reduced accuracy of $\pm 1^{\circ}$. The additional range is available to you to use, but it should be used with caution.

5.3 Adjusting angles using relative values

The angle of the flying frame can be re-adjusted to a new angle, relative to its original angle. This is achieved by resetting the sender unit to zero while in situ at the original angle as described in \Rightarrow Chapter 4.1 "Resetting the angle (zeroing)" on page 13. The array can then be tilted on the hoists, reading the value off the adjustment on the meter unit, relative to the original position.

Note: When the sender unit has been reset in this way, its true horizontal position will no longer display 0.00°. This is why we recommend checking the horizontal position at the start of each sender unit installation.





E				
	al	ne.	any	IE.

-3.6° – +

5.4 Using the laser

Take precautions to prevent anyone from looking directly into the laser beam. Wear appropriate eye protection.

The sender unit features a powerful laser to assist angle adjustment. The laser is used to confirm that the upper margin of the PA system dispersion reaches the design target - for example the seating at the rear of an auditorium.

- 1. On the «Home» screen, «LASER» is displayed at the bottom right.
- 2. Press the right-hand button once to switch the laser on.
 - Pressing the button a second time will put the laser into flashing mode, which can be useful for locating the beam in a bright location. Pressing the button a third time turns the laser off.

The on/off and flashing mode statuses are indicated by a corresponding permanent or flashing laser icon to the left of the «LASER» item \Rightarrow *****

5.5 Application example

To take an example: ArrayCalc indicates a frame angle of -3.6° from vertical.

- 1. Using ArraySight to measure this angle, you raise the first array to its operating height and then check the meter unit screen.
- 2. The figures displayed settle as the meter compensates for the swing of the array. If the settled display shows $+0.5^{\circ}$, you then use the hoists to lift the rear or lower the front of the array. Make small adjustments and allow the meter unit to calculate the new angle. Continue to make adjustments until you achieve the angle of -3.6° .
- Once the first array is complete, disconnect the meter unit from the first sender unit and reconnect it to the sender unit of the second array.
- 4. Repeat the procedure, starting with resetting the angle to zero for the second sender unit. Raise the second array, check the angle and adjust the angle as necessary.
- 5. If subsequent re-adjustment of the first array is required the meter unit can be re-connected to the first sender unit and the correct offset will be recalled.

NOTICE!

Potential risk of malfunction and/or damage to the device!

Only use POE injector devices and/or switches which comply with the POE standards **IEEE802.3at** or **IEEE802.3af**.

DO NOT use **passive** injector devices or switches.

In standard operation, the sender unit is directly connected to the meter unit which provides power supply and communication via its RS232 interface.

However, the sender unit also supports the d&b OCA/AES70 protocol and therefore directly integrates into the d&b workflow in connection with the d&b ArrayCalc simulation and R1 Remote control software. This allows multiple sender units to be read out within R1.

By factory default, the sender unit comes with the following ethernet and remote settings:

Auto \Rightarrow DHCP+LL (Link Local)
192.168.0.111
255.255.255.0
192.168.0.1
0.01







7.1 Cleaning

During normal operation, the units provide maintenance-free service.

If the units require cleaning ...:

- Use a soft cloth only.
- Do not use any solvent cleaners.
- Do not spray directly on the LC display or laser exit.

7.2 etherCON connector socket protection

NOTICE!

Possible risk of damage to the device!

Always make sure the dust cap of the etherCON connector socket is properly attached (closed) during transport or when it is not in use, as shown in the graphic opposite.

This prevents the sender unit from damage due to:

- Ingression of moisture or liquids (e.g. water from rain) through the etherCON connector socket,
- corrosion of the connector socket's spring contacts.



7.3 Calibrating the accelerometer ENSURE the laser is switched off throughout this procedure.

The ArraySight sender units are calibrated in the factory using precision calibration jigs. If this process is attempted without a level surface and a true 90° angle, then calibration information could be incorrect. Only attempt this process if you have the appropriate facilities to ensure accuracy.

Calibration is performed using gravity as a reference.

Note: If you are interrupted during any of the following steps, or the display shows anything other than indicated, you will need to start the procedure again. Errors can occur if the unit 'times out' or if a button is inadvertently pressed twice.

The calibration procedure can be canceled at any time by pressing the left-hand «CANCEL» button.

- 1. Place the sender on a known level surface with a block or side fence positioned at exactly 90°, so the unit can be registered accurately both vertically and horizontally.
- 2. Connect the sender unit to the meter unit and power it up.
- Select «MENU» ⇒ «Sender settings» ⇒ «Calibrate». You'll then need to follow a six step procedure:
- First, the meter screen will prompt you to place the sender in the z+ position.

z+ is the sender unit's "normal" orientation, sat flat on the table top.

Select «START»...

- When «z+ acknowledged » is displayed, place the unit in the z- position, i.e. upside down on the table top, so the base of the unit is facing upwards.
 Select «NEXT»...
- When «z- acknowledged» is displayed, you are next prompted to place the unit in the x+ position.
 In the x+ position, the unit points upwards, with the laser aperture at the top. This requires holding the unit with the base against a vertical surface.
 Select «NEXT»...



WARNING! Refer to manual!	1/6
Place in z+ pos.	
CANCEL	START

	Calibrate	2/6
z+ acknow Place in z [.]	ledged - pos.	
CANCEL		NEXT





d&b audiotechnik ●■



ArraySight

z+



- When «x+ acknowledged» is displayed, place the unit in the x- position by turning the unit 180 degrees. The laser aperture should now point downwards and the top of the unit should rest against the vertical surface. Select «NEXT»...
- 5. When «x- acknowledged» is displayed, you are next prompted to place the unit in the y+ position. Turn the unit on its side, in a clockwise direction so when the unit is viewed from the front, the brass screw nearest the top surface is now at 9 o'clock, and the base of the unit rests against the side fence. This is y+. Select «NEXT»...
- When «y+ acknowledged» is displayed, you are prompted to place the unit in the y- position. Turn the unit through 180 degrees.

The brass screw has moved from 9 o'clock to 3 o'clock. Select «NEXT»...

When «y- acknowledged» is displayed on the screen, the sender unit will process the measurements and calibration will be complete. This data is stored in the non-volatile EEPROM in the sender unit.

Correctly calibrated, the sender unit will provide accurate angle measurements in all orientations.

7.4 Firmware

Unsupported hardware revision

In case of a mismatch of the hardware and firmware of an ArraySight meter unit the following message will be shown:

Unknown Hardware Cannot identify hardware revision. Please contact service.

If this message appears, please contact your local dealer or contact d&b service directly. To find a contact, visit our website www.dbaudio.com.

Default d&b MAC adress

If data in the flash memory is missing or incorrect, the device will use a default MAC address. This could lead to varioous network problems between devices. Please refer to the R1 Remote control software for an error message.

The following sets are covered by this manual (Mounting instructions):

 Z5710.002: d&b V-Series ArraySight set. (Including all components necessary for two flying frames)

Please verify the shipment for completeness and proper condition of the items.

Tools required

- Torx screw driver T20
- Torx screw driver T25
- Socket wrench SW8

8.1 Z5710.002 Mounting instructions

Scope of supply

Pos.	Qty.	d&b Code	Description	
	1	Z5710.002	d&b ArraySight set V-Series	
Including:				
[1]	2	Z5711	ArraySight sender unit	
[2]	2		V Flying frame adapter	
[3]	12		Panhead screw (Torx T20) M4 x 12	
[4]	2	K6006.200.00	Shielded CAT5e 1:1 cable, 30 m (100 ft)	
[5]	1	Z5712	ArraySight meter unit within transport case	
	1	D2735.EN .01	ArraySight Manual	







Assembly

- 1. First attach the ArraySight sender unit **[1]** to the flying frame adapter **[2]**.
- 2. Fix the sender unit using two panhead screws (M4 x 12) [3].
- 3. Position the V flying frame onto an appropriate and flat surface.
- 4. Attach the sender unit assembly to the mounting plate of the frame with the laser unit facing towards the front of the frame.
- 5. Fix the sender unit assembly using four panhead screws (M4 x 12) [3].
- 6. Recheck your work and ensure all screws are properly tightened.

9.1 Declaration of conformity

This declaration applies to:

d&b Z5710 ArraySight set

Including:

- Z5711 ArraySight sender unit
- Z5712 ArraySight meter unit

by d&b audiotechnik GmbH & Co. KG.

All product variants are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications.

We herewith declare that said products are in conformity with the provisions of the respective directives including all applicable amendments.

Detailed and applicable declarations are available on request and can be ordered from d&b or downloaded from the d&b website at <u>www.dbaudio.com</u>.

9.2 WEEE Declaration (Disposal)

Electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product according to the respective national regulations or contractual agreements. If there are any further questions concerning the disposal of this product, please contact d&b audiotechnik.

WEEE-Reg.-Nr. DE: 13421928



FreeRTOS

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated ocumentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

lwIP

IwIP is licensed under the BSD license: Copyright (c) 2001-2004 Swedish Institute of Computer Science. All rights reserved. 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AS IS AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

9.3 Licenses and Credits

This product uses a number of third-party libraries to provide certain features. These libraries are supplied along with the product.

edeca/Electronics graphics library

Copyright (c) 2010-2015, David Cannings All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: * Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. * Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. * Neither the name of the author nor the names of contributors may be used to endorse or promote products derived

from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

OCA Alliance EULA 1. Definitions

"License" shall mean the terms and conditions for use, reproduction, and distribution of the Work as defined by Sections 1 through 8 of this document.

"Licensor" shall mean the OCA Alliance and/or its members or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source form" shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, electrical schematic diagrams, printed circuit board layouts, mechanical design of hardware, and configuration files. "Object form" shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Embedded" shall identify software which is incorporated into specific hardware and delivered with that hardware as part of a finished product.

"Work" shall mean the package of computer files named "OCA Microdemo Source" available for download from the OCA ALLIANCE website, which may include technical documentation, software source code, hardware schematic diagrams, hardware printed circuit board layouts, and hardware bill of materials, and which may vary from time to time or at any time.

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License

Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, nonexclusive, no-charge, royalty-free, irrevocable copyright license to use, reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License

Subject to the terms and conditions of this License, each Contributor who holds any patent rights to any aspect of the Work hereby grants to You a perpetual, worldwide, non-exclusive, nocharge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer that part of the Work covered by such patent claims. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution 4.1 Source or Object Redistribution

You may reproduce and distribute copies of the Work or Derivative Works thereof as computer files in Source or Object form provided that You give any other recipients of the Work or Derivative Works a copy of this License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

4.2. Embedded Redistribution

You may reproduce and distribute Embedded copies of the Work or Derivative Works thereof provided that Your reproduction and distribution of the Work complies with the conditions stated in this License.

5. Trademarks

This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work.

6. Disclaimer of Warranty

Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.

You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License. Neither Licensor nor any Contributor warrants that the Work will be free from bugs, viruses, errors, or other program limitations, nor access to the Internet or to any other service or content through the Work.

7. Limitation of Liability, and Indemnification 7.1 No Liability

In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, equipment failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

In downloading the Work, You hereby expressly acknowledge that the limitations of liability and damages set forth above are fundamental elements of the basis of the bargain between You and the Contributors, and that the Contributors would not have granted you the licenses to use the work without such limitations.

7.2. Indemnity

You hereby agree to defend, indemnify and hold harmless each Contributor, their shareholders, members directors, officers, managers, employees, licensees, agents, successors and assigns from and against any and all loss, liability, damages, claims, actions, lawsuits, demands and expenses (including reasonable attorneys' fees and costs) based directly or indirectly on any third party claim, suit or demand related to Your exploitation of any of the licenses hereby granted and the exploitation of any of such licenses through You and your successors, distributees and assigns.

7.3. Third Party Beneficiaries

You hereby acknowledge and agree that each Contributor is an intended, express third party beneficiary to this License and may rely on and enforce the provisions of this License against You as if such Contributor had signed this License, to enforce its rights in and to the Work and afforded under this License.

8. Technical Support

No Contributor shall be obliged to provide technical support for the Work.

Other than documentation and training materials that may be distributed as part of the Work, no Contributor shall be required to provide training, advice, examples, or other assistance regarding use of the Work.

Resolution of any and all technical problems arising from use of the software, whether due to errors in the Work, errors in Your application of the Work, or changes in the hardware or software environment in which the Work operates, shall be Your sole responsibility, and no Contributor shall be obliged to provide product updates, patches, or bug fixes for any reason.

9. Accepting Warranty or Additional Liability

Notwithstanding Section 8, while redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights ("Support Obligations") consistent with this License.

In accepting Support Obligations, You shall act only on Your own behalf and on Your sole responsibility, not on behalf of any Contributor. By accepting Support Obligations, You agree to indemnify, defend, and hold all Contributors harmless for any liability incurred by, or claims asserted against, said Contributors pursuant to Your Support Obligations.

General

This License shall be governed and construed in accordance with the internal laws of the State of Washington, United States of America, without reference to conflicts of laws principles. The United Nations Convention on Contracts for the Sale of Goods does not apply to this License.

You agree to submit to the personal and exclusive jurisdiction of the courts located within Whatcom County in the State of Washington. This License constitutes the entire agreement between the parties with respect to its subject matter, and supersedes any other written or oral agreement.

