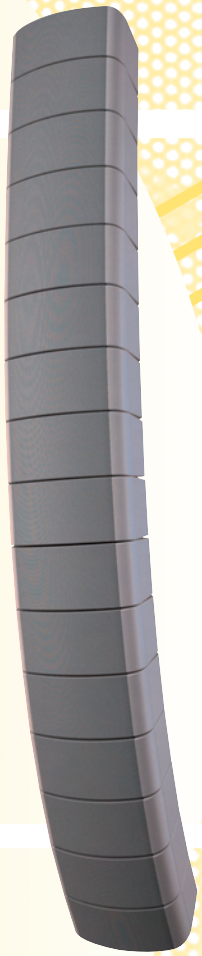
OmniLine®

System Preparation

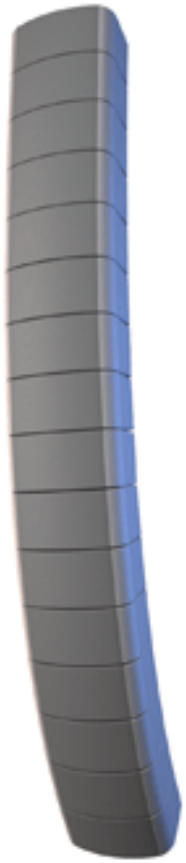


MARTIN AUDIO
LONDON

The Martin Experience

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Martin Audio Omniline® system preparation



Notes:

A variety of mounting and suspension systems are available. Make sure you have ordered the required wall mounting or suspension kit to suit your chosen installation method. See section 4 for kit details…

- Martin Audio Omniline® loudspeakers must be installed by experienced loudspeaker installation personnel using the full installation kit provided
- It is the installer's responsibility to ensure that all relevant local, national and international electrical, fire and building safety regulations are complied with
- Every Omniline® loudspeaker must be fitted with a steel safety wire this can be fitted between an attachment bracket (provided) and a suitable supporting structure.

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You will need the following tools for OmniLine preparation and installation.

Tool	Size	Operation
Building arrays		
Screwdriver	PZ1	Rear covers removal/assembly
Allen Key/Socket Set	4	Link Plates assembly
Open Ended Spanner	10mm	Link Plates assembly
Screwdriver	S3	Wiring
4 Cab Bracket		
Allen Key/Socket Set	5	Adding brackets to the array
Allen Key/Socket Set	8	Adding collar
Allen Key/Socket Set	6	Clamping collar
Open Ended Spanner	13mm	Clamping collar
8 - 16 Bracket		
Allen Key/Socket Set	5	Adding brackets to the array
Allen Key/Socket Set	8	Adding collar
Allen Key/Socket Set	6	Clamping collar
Open Ended Spanner	13mm	Clamping collar
Pliers		Split pin removal/fitting
Open Ended Spanner	8mm	Attaching Dog Grip
Flying Bracket		
Allen Key/Socket Set	5	Adding brackets to the array
Allen Key/Socket Set	6	Adding brackets to the array
PZ = Pozidrive		S = Straight/Flat head

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1 Introduction

Omniline® is a versatile, micro-line array designed for installation in a wide variety of architectural environments.

It's modular approach and scalability extends its use from foreground applications to sound reinforcement in large acoustic spaces.

Intelligent software enables an array to be configured to deliver sound precisely over any vertical angle to fit the venue profile without spilling onto surfaces where sound is not required.

Additionally, elimination of high frequency side-lobes gives Omniline® the advantage over currently available DSP steered columns, making it suitable for high quality music reproduction as well as speech in large, reverberant spaces.

2 Main features

The Omniline® module consists of 2 x 89mm reflex-loaded, mid/low radiators either side of a central strip of 5 x 14mm HF devices in a unique, patent pending arrangement. All drives have been painstakingly developed from the ground up, specifically for the array module.

3 Warranty

Martin Audio Omniline® products are warranted against manufacturing defects in materials or craftsmanship over a period of 5 years from the date of original purchase.

During the warranty period Martin Audio will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorised Martin Audio service agent or distributor.

Martin Audio Ltd. cannot be held responsible for defects caused by unauthorised modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by Martin Audio. Martin Audio is not liable for consequential damages.

This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

4 Installation methods and kit details

A site survey is required before purchase. Omniline® software should be used to determine the position, installation method and number of Omniline® modules required for the installation.

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Omniline® module pack
Each pack of OmniLine® modules comprises the following parts:



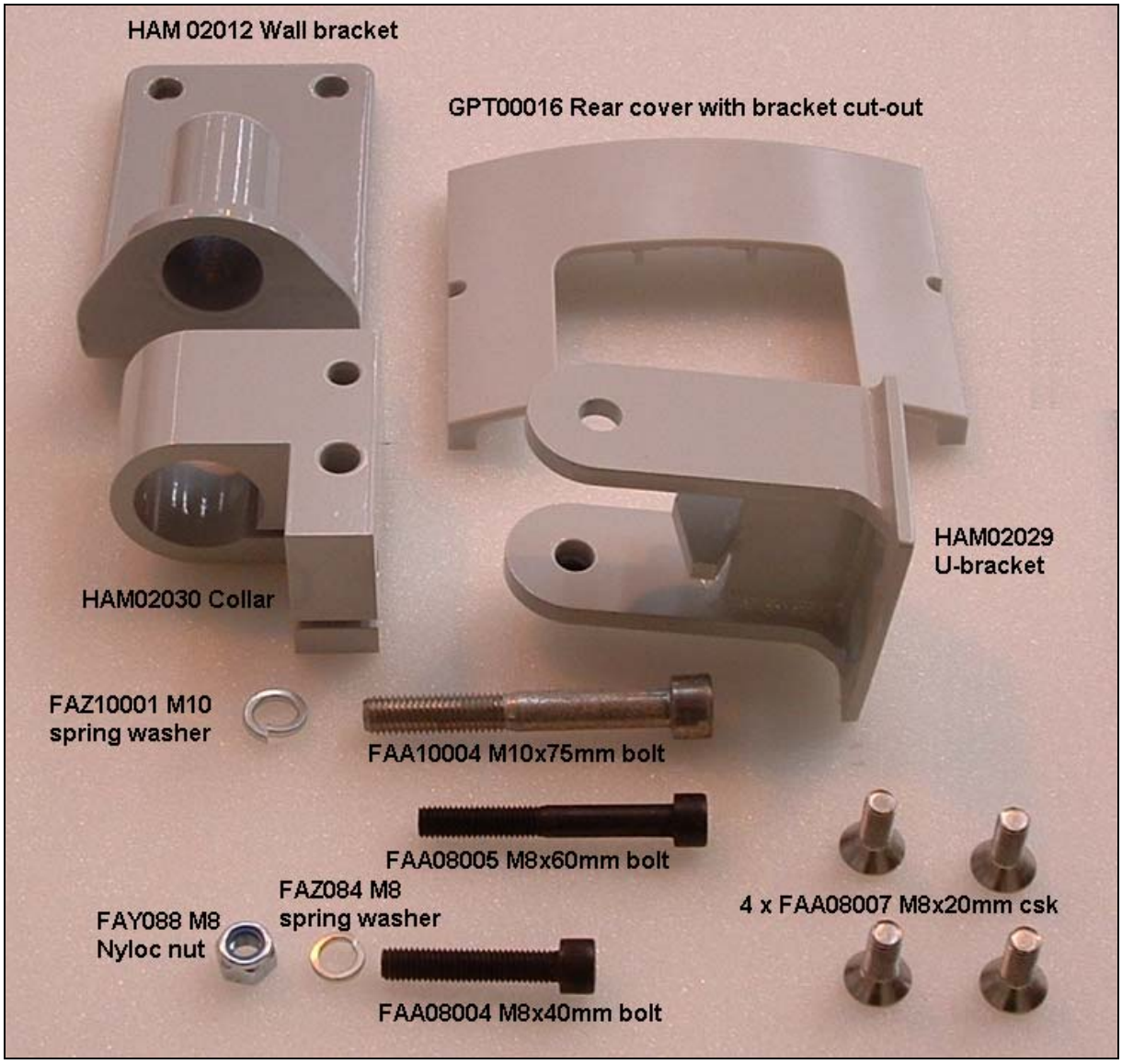
Omniline® module pack

Note that the self adhesive ***shade*** included in the module pack may be used to prevent down-lighting from shining down through the grilles in architecturally sensitive locations.

There are three methods of installing an Omniline® Loudspeaker system. Choose the position and number of Omniline® modules required as indicated by the Omniline® software.

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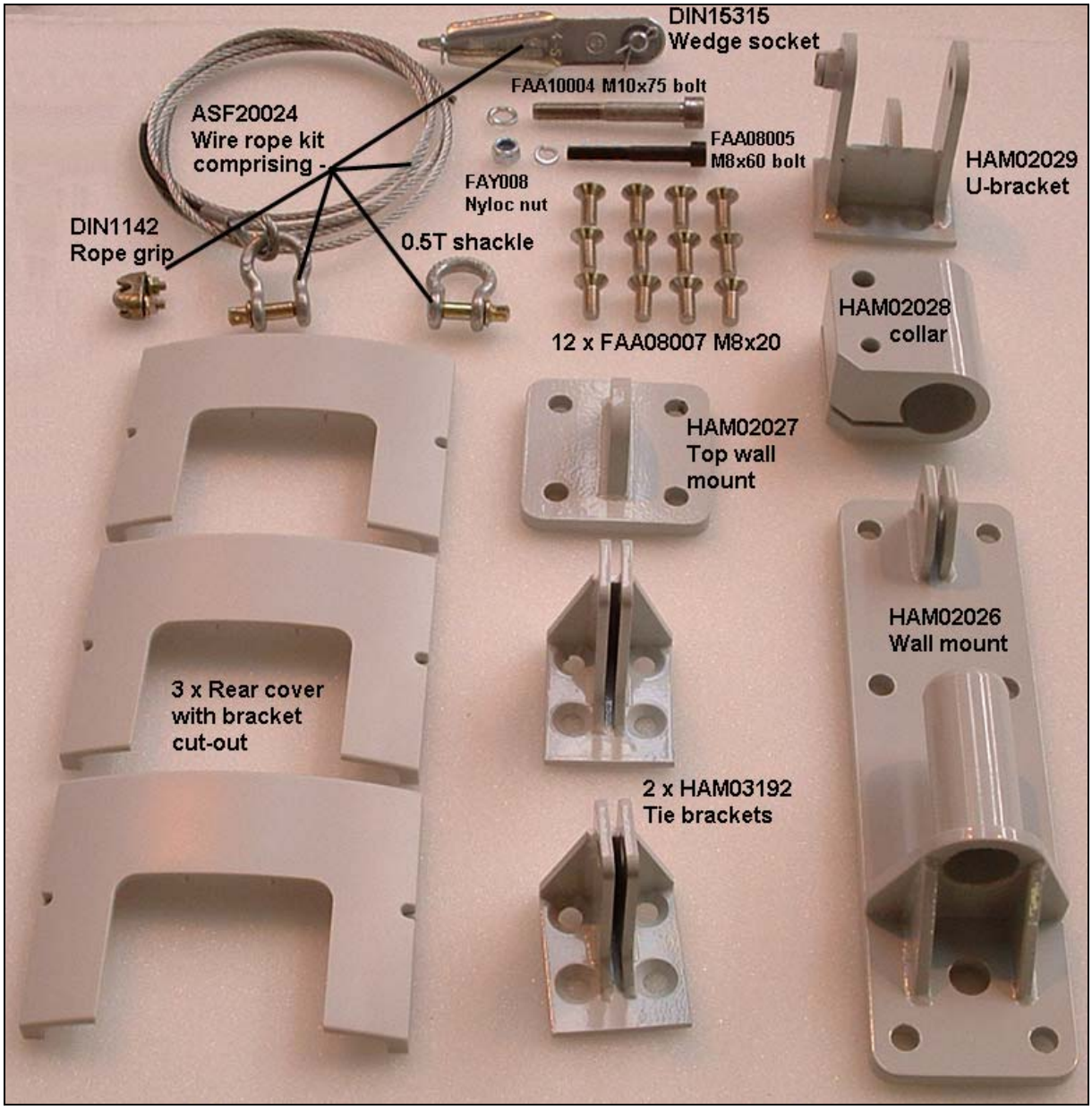
4 x OmniLine® wall mounting kit
Each 4 x OmniLine® wall mounting kit comprises the following parts:



4 x OmniLine® wall mounting kit

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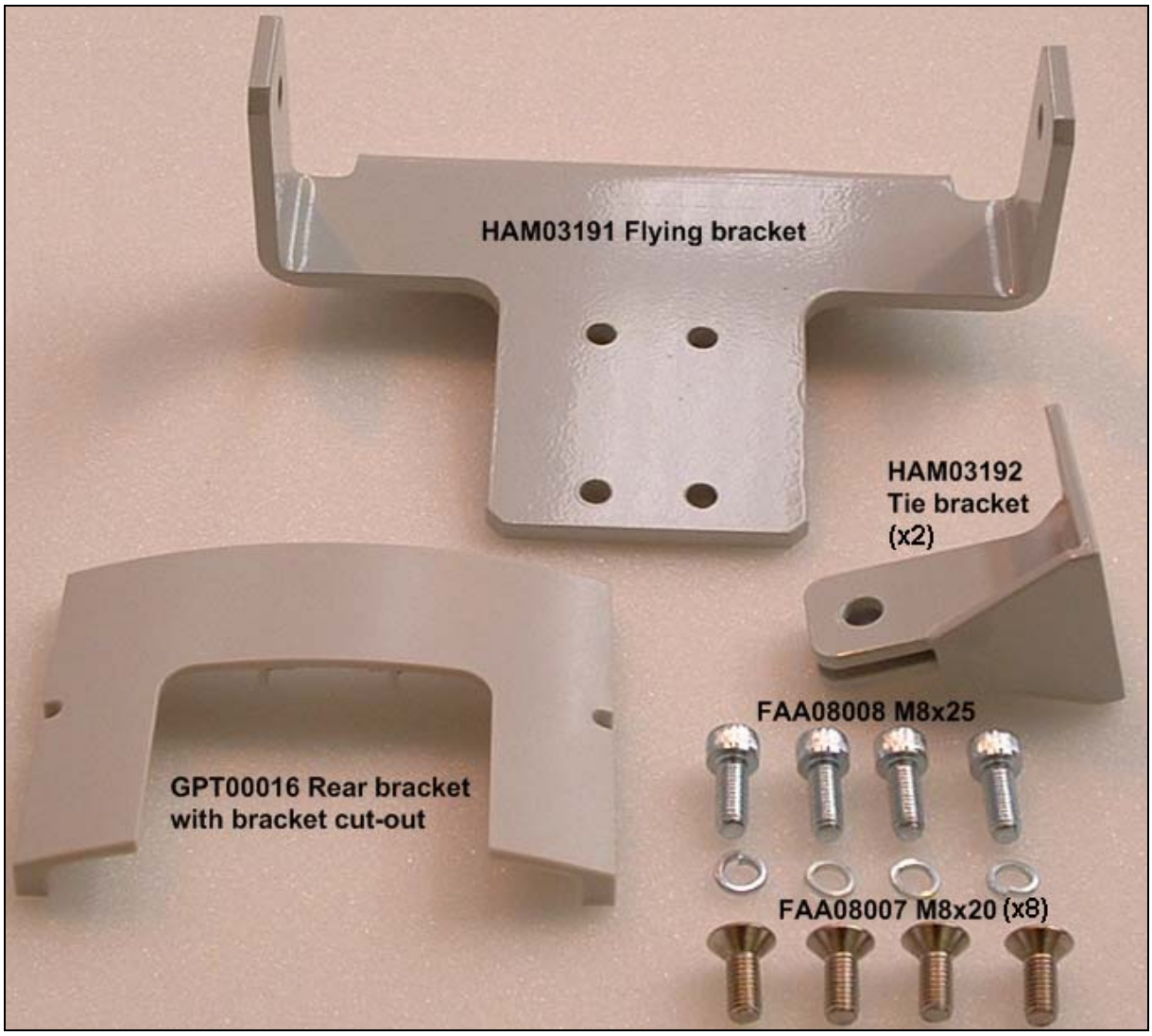
8-16 x OmniLine® wall mounting kit
Each 8-16 x OmniLine® wall mounting kit comprises the following parts:



8-16 x OmniLine® wall mounting kit

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OmniLine® flying kit
Each OmniLine® flying kit comprises the following extra parts.



5 Unpacking

Every Martin Audio loudspeaker is built to the highest standard and thoroughly inspected before it leaves the factory.

After unpacking the system, examine it carefully for any signs of transit damage and inform your dealer if any such damage is found.

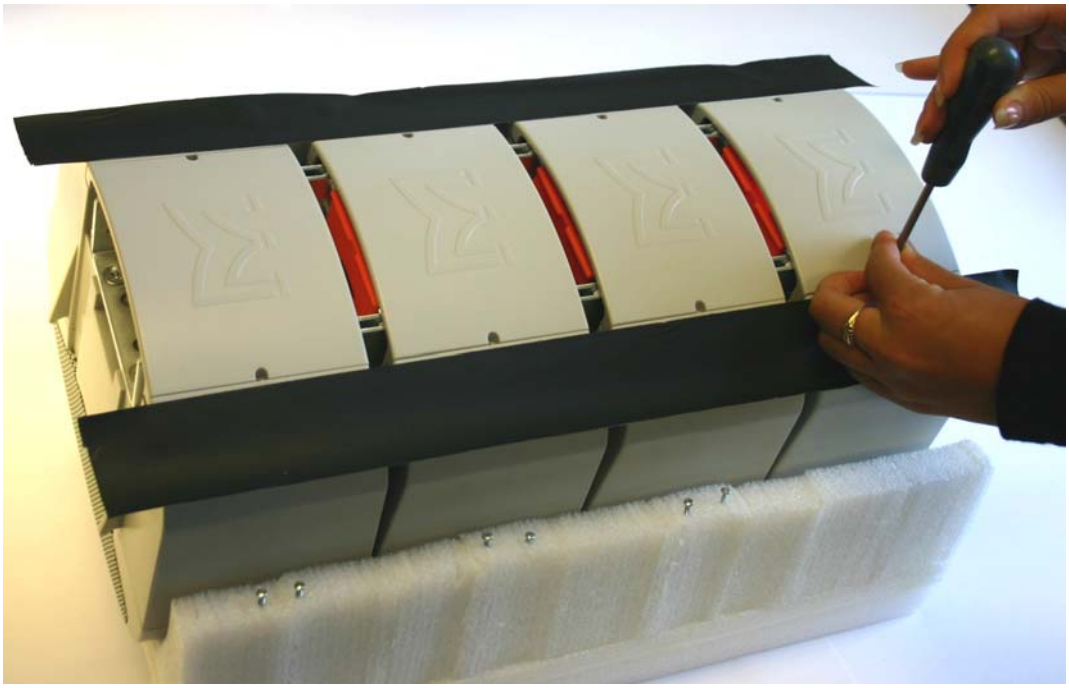
We suggest that you retain the original packaging so that the system can be repacked at a future date if necessary. Please note that Martin Audio and its distributors cannot accept any responsibility for damage to any returned product through the use of non-approved packaging.

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5.1 System preparation



To avoid flattening or damaging your OmniLine grilles, we strongly recommend that you keep each block of four Omniline® modules in their polystyrene trays.



Take off the rear covers by removing the rear screws from each unit.

Tips!

1) If you are not using a magnetic screwdriver, we recommend covering the rear port holes with some tape as shown above to prevent dropping screws down the ports!

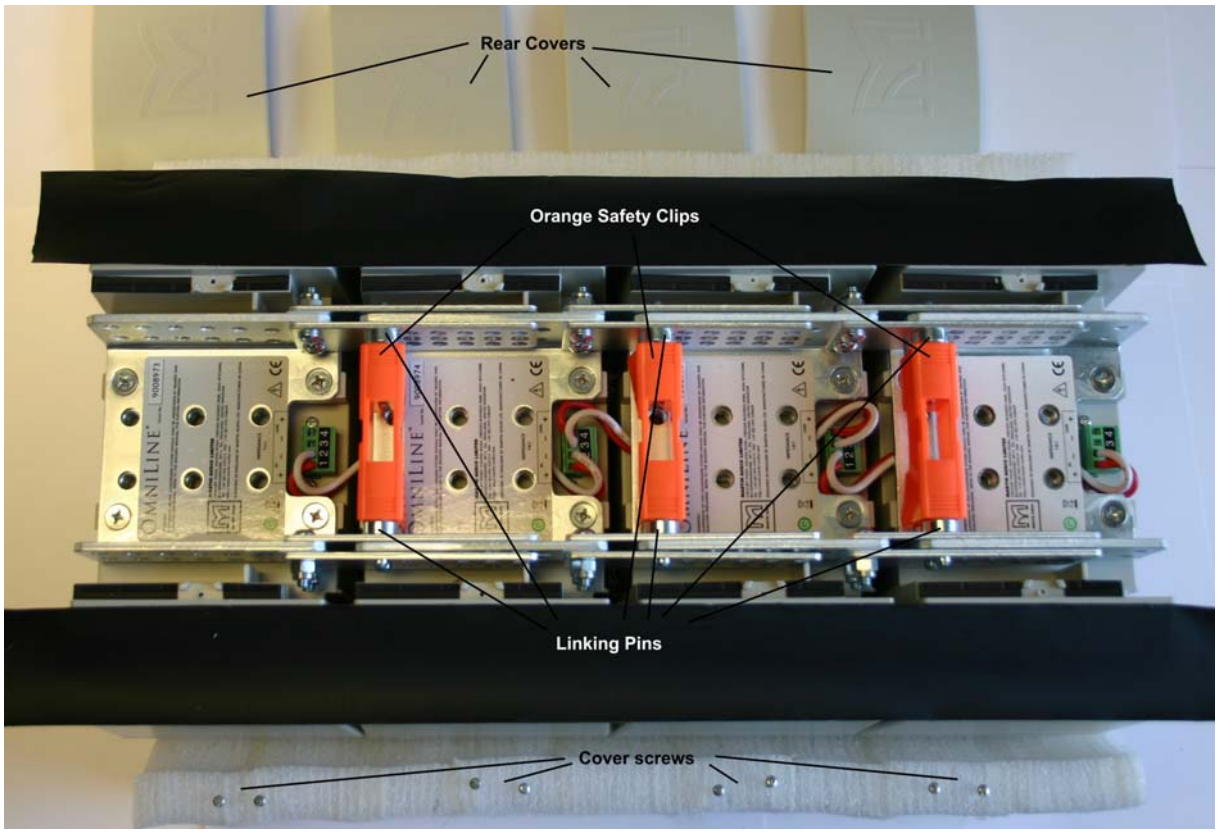
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2) Press the screws into the front of the polystyrene tray to avoid loosing them.

5.2 Splay angle adjustment

Omniline® modules are shipped with splay angles set at 0 degrees. Having determined splay angles and mounting or suspension attachment points using the Omniline® software, set the required inter-module splay angles as follows:

Tip!
Leave modules that require wall mounting or suspension attachments (see software recommendations) until last as these brackets need to be orientated and fitted before nearby link pins are inserted – see later…

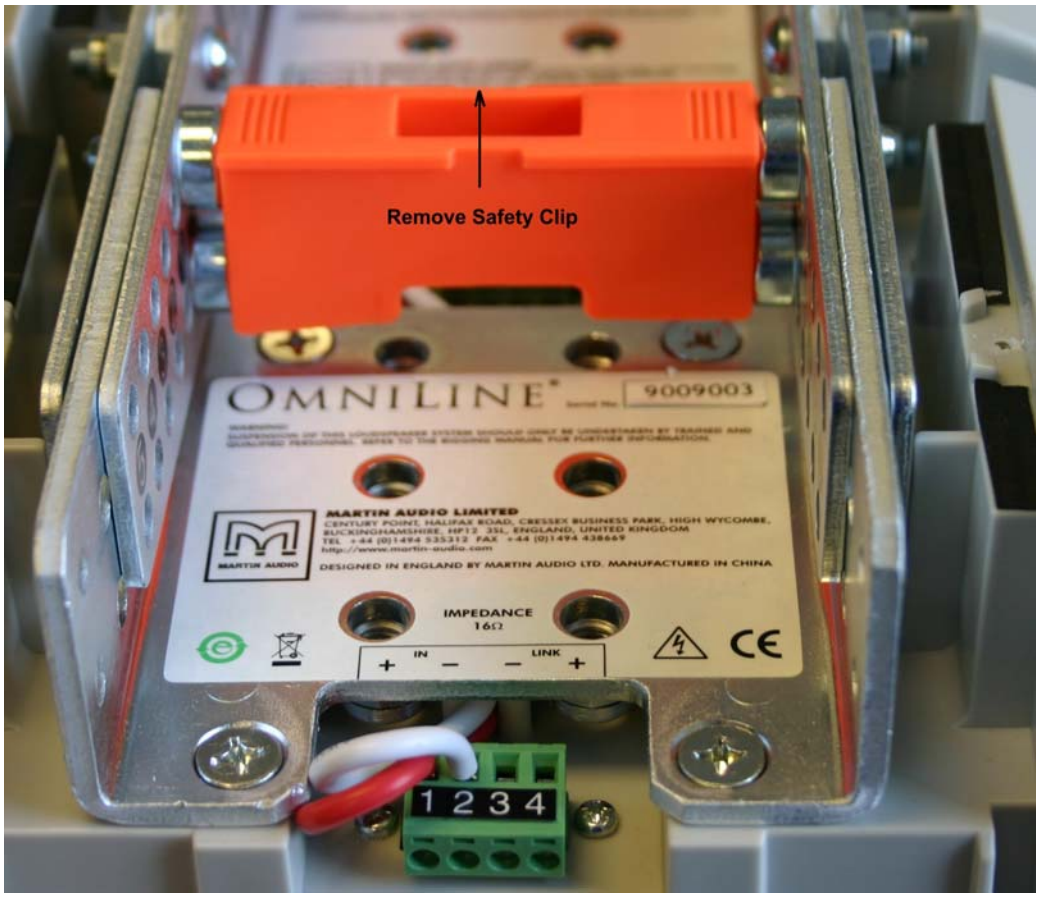


1) Remove the rear cover

2) Remove the orange safety clip

3) Remove the linking pins from the splay angle holes

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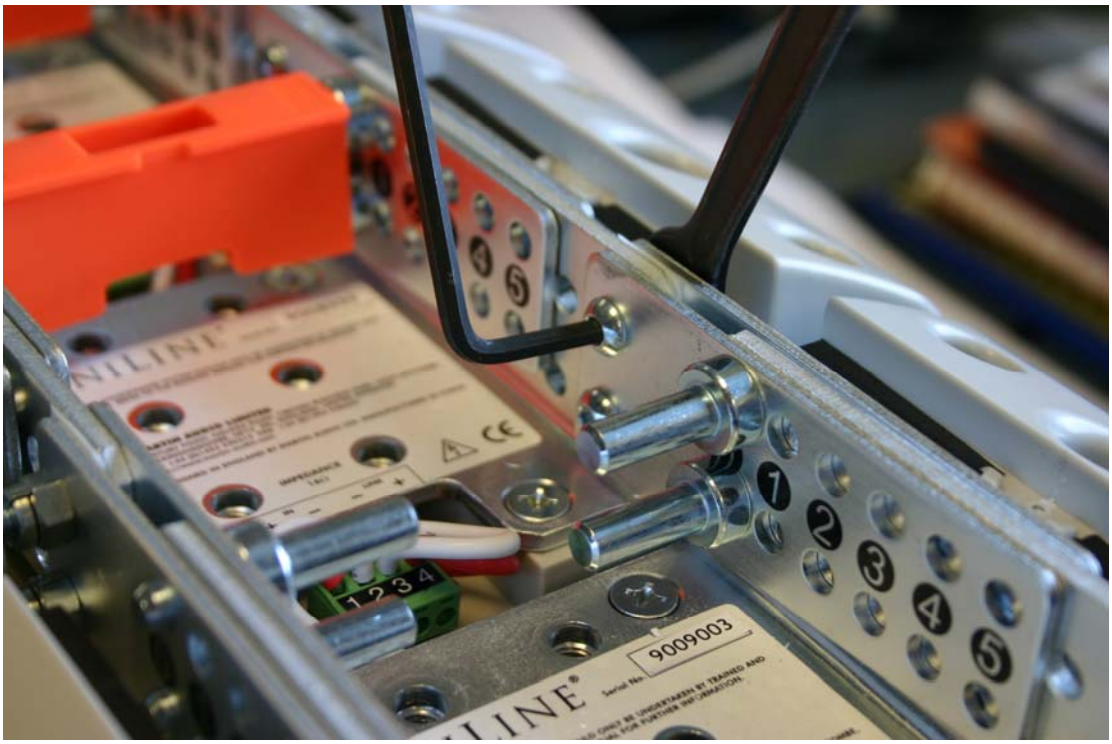
Remove the Orange Safety clip



Remove the link Pins

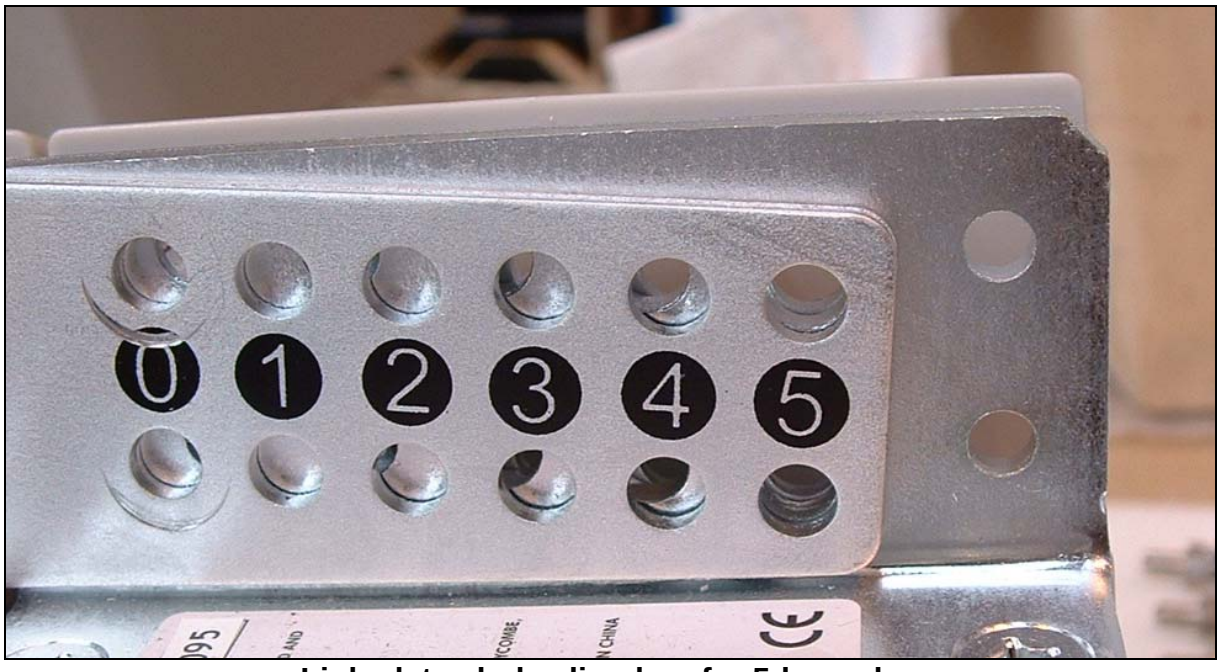
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Tip!
If the linking pins are difficult to remove, loosen the four link plate nuts and bolts for that module. Don't forget to re-tighten them after you have positioned the link pins



Loosen the Link Plate Nuts and bolts if necessary

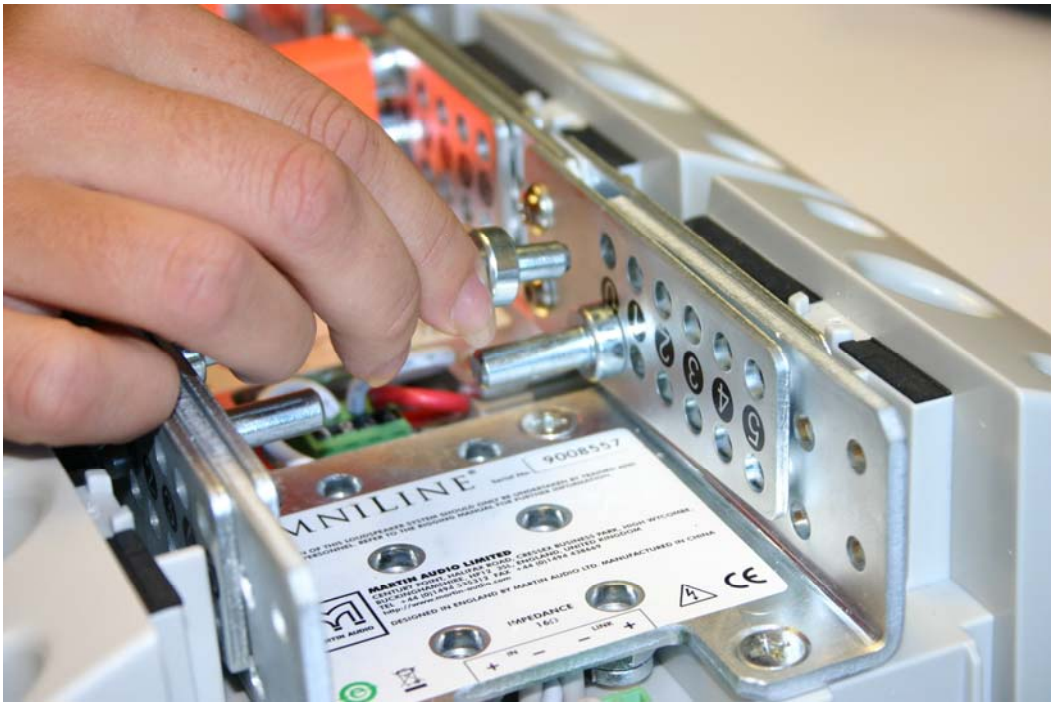
4) Angle the Omniline® modules to the required splay angle lining up the link plate holes at the required angle positions marked on the bracket



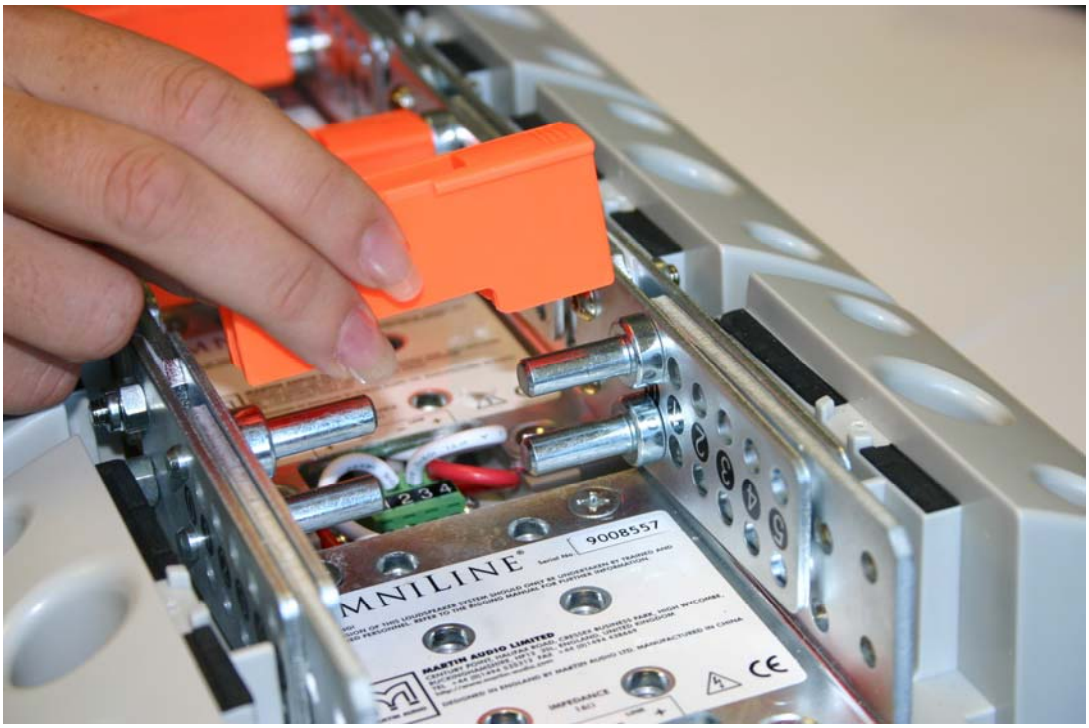
Link plates holes lined up for 5deg splay

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5) Insert the four linking pins into the aligned link plate holes.



6) Replace the orange safety clip after positioning all four linking pins…



Replace the orange safety clips!

System wiring

See separate document entitled ***Powering your Omniline®.***

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4-Omniline® module wall mounting

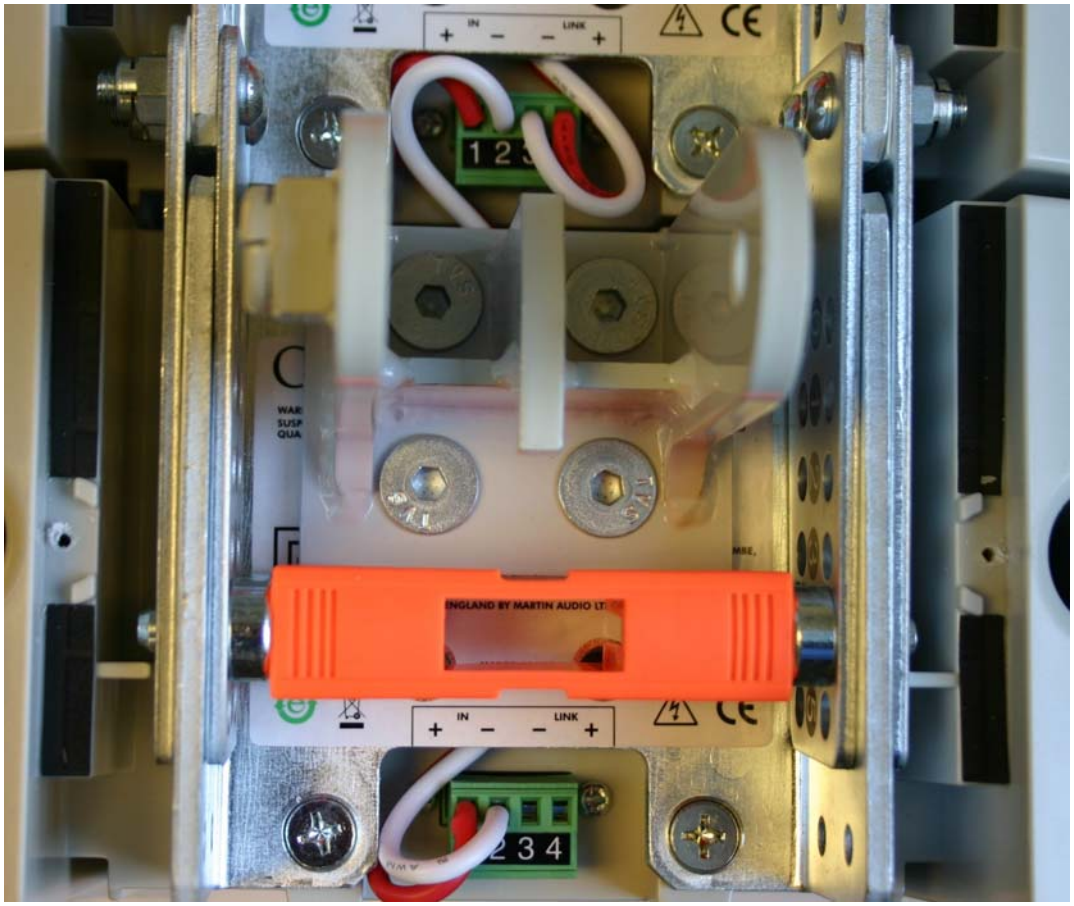
To remind you:

- Martin Audio Omniline® loudspeakers must be installed by experienced loudspeaker installation personnel using the full installation kit provided
- It is the installer's responsibility to ensure that all relevant local, national and international electrical, fire and building safety regulations are complied with
- Every Omniline® loudspeaker must be fitted with a steel safety wire this can be fitted between an attachment bracket (provided) and a suitable supporting structure.

6.1
Fit the U-bracket first – and then the linking pins.

Note that the recommended U-bracket position is on the second OmniLine unit from the bottom of the arrays.

Its final orientation will be determined by the required linking pin positions – one way round for 0-2 degrees, the other way round for 3-5 degrees.

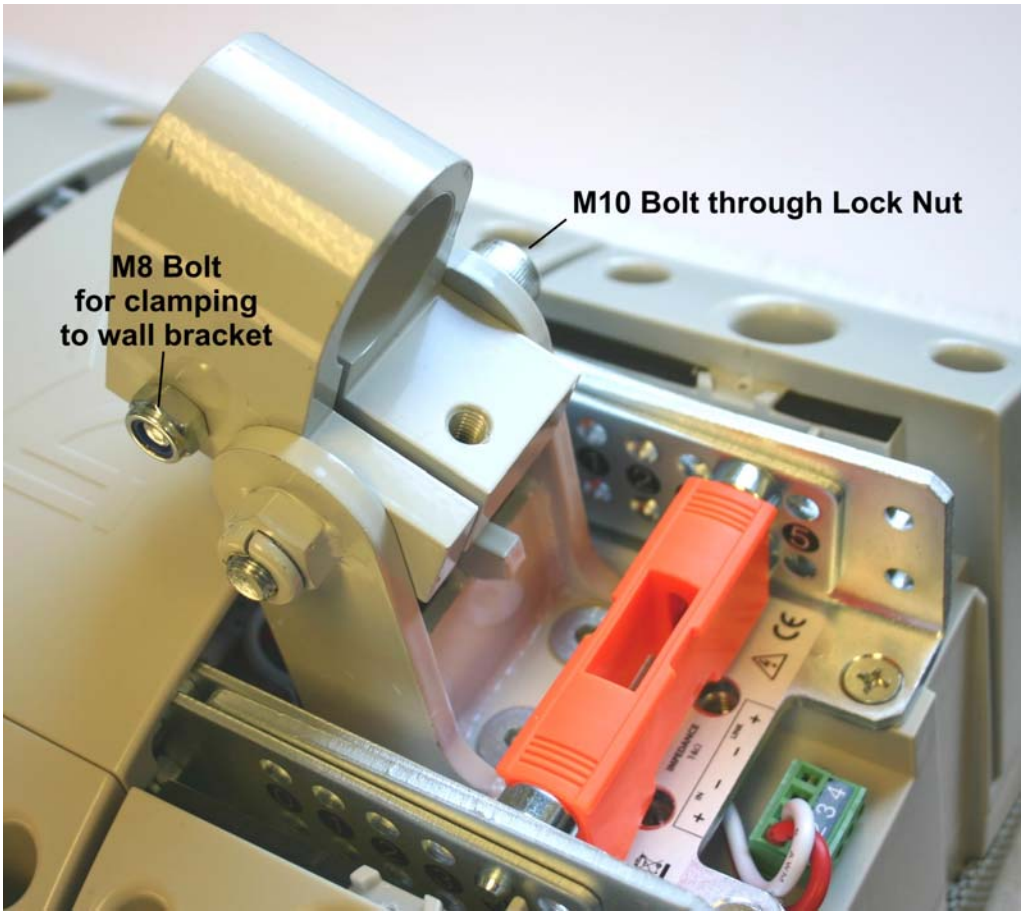


U-bracket (shown positioned for 4 degree linking pin position)

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6.2
If you haven't already prepared Omniline® module splay angles as indicated by the Omniline® software – ***see section 5.2 above…***

6.3
Fit the Collar to the U-bracket using the FAA10004 M10 x 75 bolt. Note the orientation – collar towards the top of the array (left on the photograph)



1) Tighten the M10 bolt – tight enough so that it protrudes at least 1.5 thread turns through the lock nut but still allows U-bracket movement for easy adjustment.

2) Fit the FAA08005 M8 x 60mm bolt (see kit identification pictures earlier) loosely to the collar as shown above

6.4
Wire up the array.

See separate document entitled ***Powering your Omniline®***.

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6.5

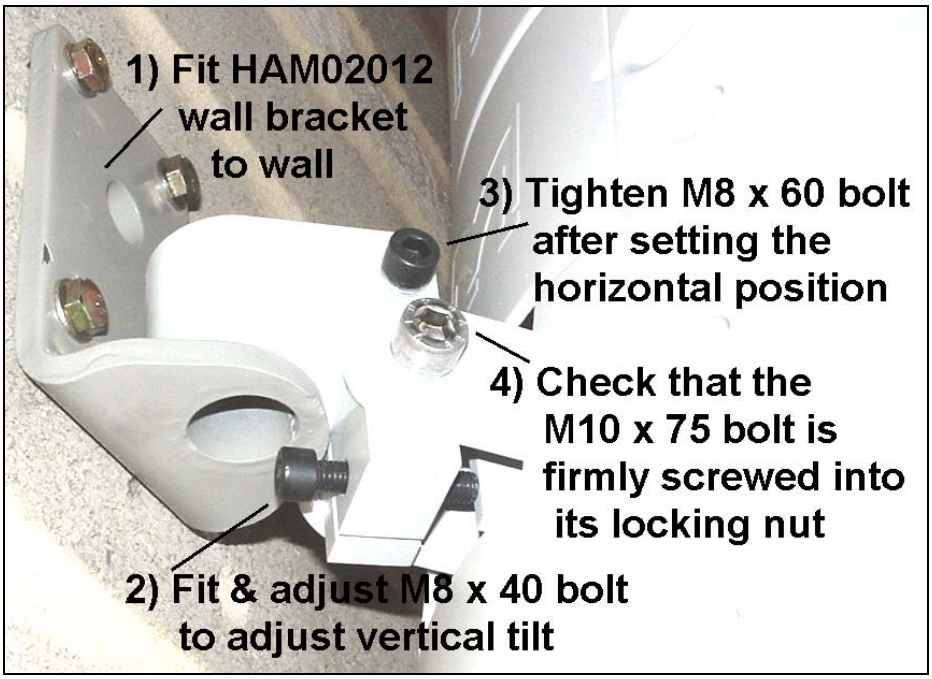
Fit rear the rear covers - using the cut out version for the module with the bracket



6.6

1) Fit the HAM02012 Wall Bracket – see kit identification picture earlier. A drilling template is included with the bracket

Lift the block of four Omniline® modules onto the wall mounting – see below.



2) Fit the FAA08004 M8 x 40 bolt and adjust screw to set vertical tilt angle
3) Tighten clamping bolt (FAA08005 M8 x 60) after setting the horizontal angle
4) Check that the M10 x 75 collar-to-U-bracket bolt is firmly screwed into its locking nut

Recheck everything!

ALLWAYS double check that all Orange safety clips are in place as this is essential to ensure that the array will stay safely locked together

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6 8-16 Omniline® module wall mounting

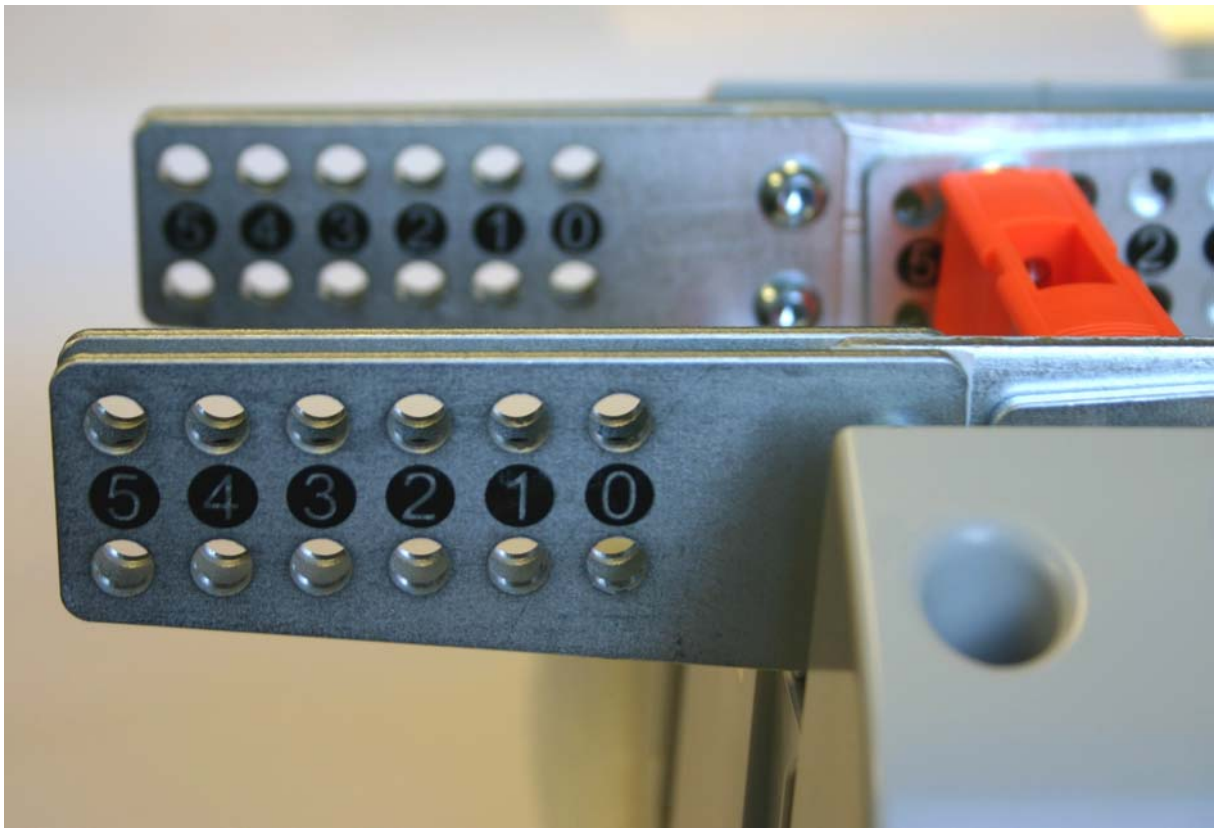
To remind you:

- Martin Audio Omniline® loudspeakers must be installed by experienced loudspeaker installation personnel using the full installation kit provided
- It is the installer's responsibility to ensure that all relevant local, national and international electrical, fire and building safety regulations are complied with
- Every Omniline® loudspeaker must be fitted with a steel safety wire this can be fitted between an attachment bracket (provided) and a suitable supporting structure.

7.1

1) Prepare your blocks of four OmniLine® modules to the splay angles recommended by the OmniLine® software **– *see section 5.2 earlier.***

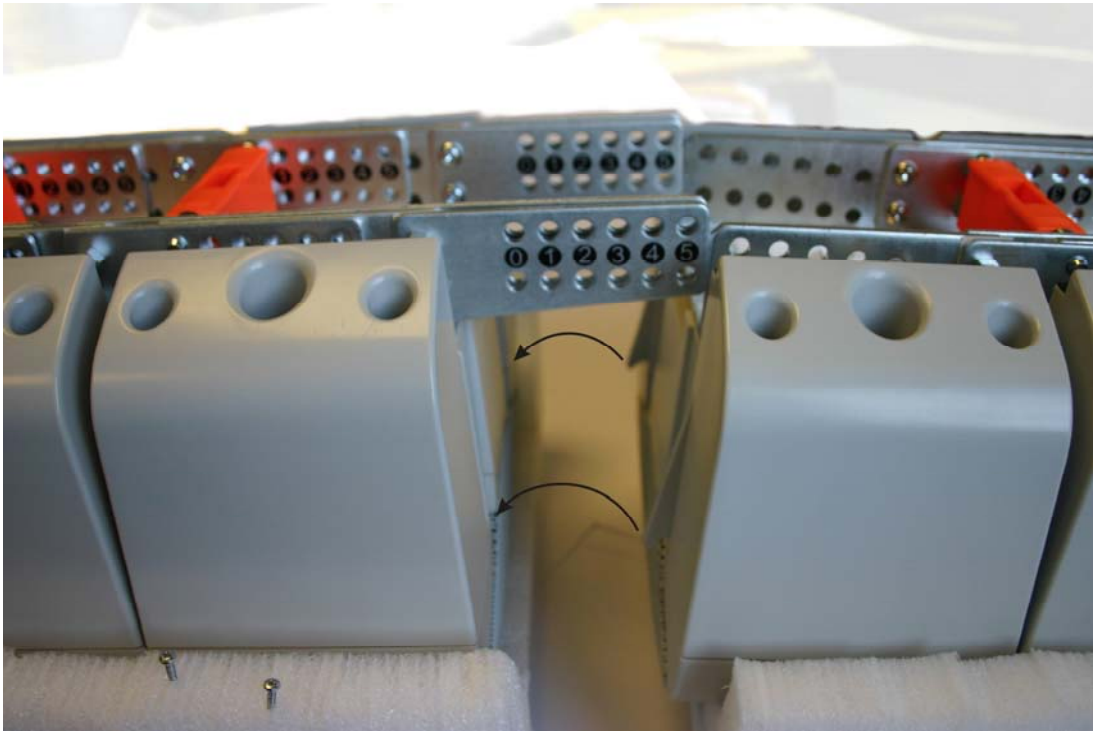
2) Add link plates to the lower module of the upper 4-module blocks using the link plate bolts and lock nuts supplied with each four OmniLine® modules – see kit picture at the beginning of this document.



Fit link plates (supplied with each four modules)
to the bottom of each block of four

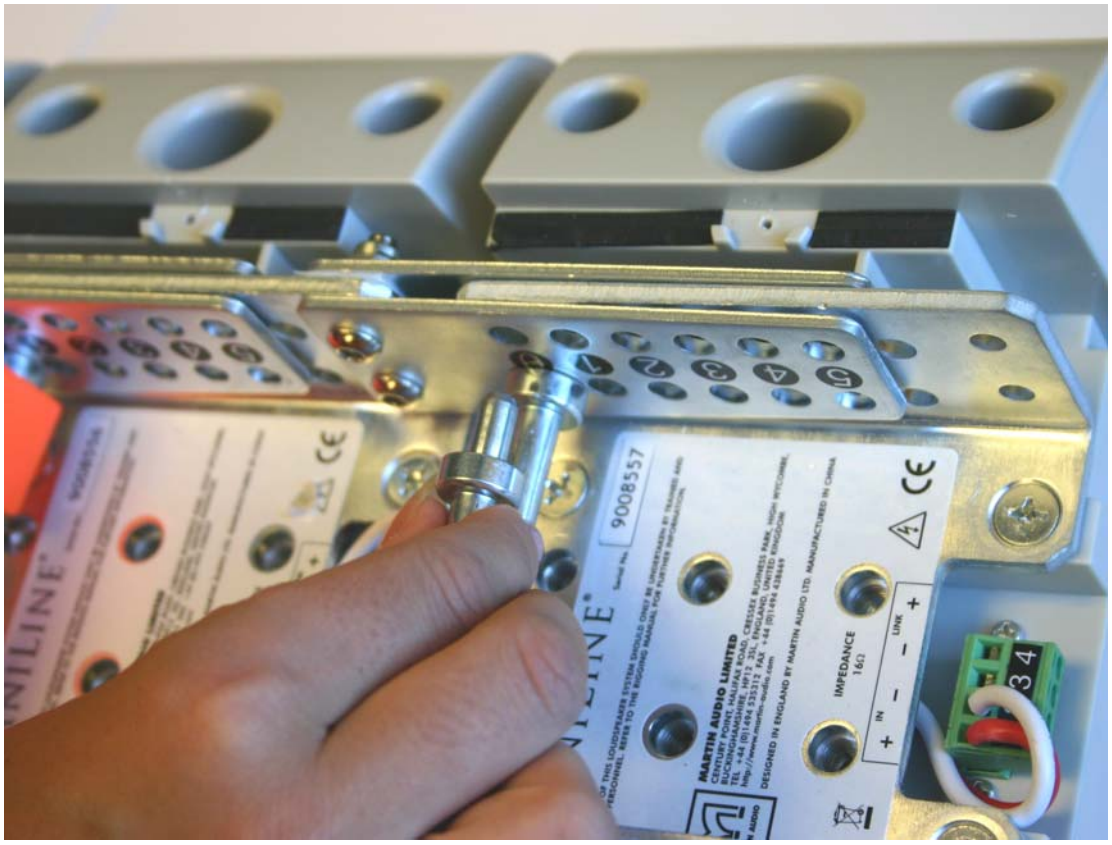
3) Fit 4-module blocks together by interlocking modules together near the front.

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Interlock modules together

Ensure that the tongues (right) are properly locked into the grooves (left) – see arrows in above illustration…

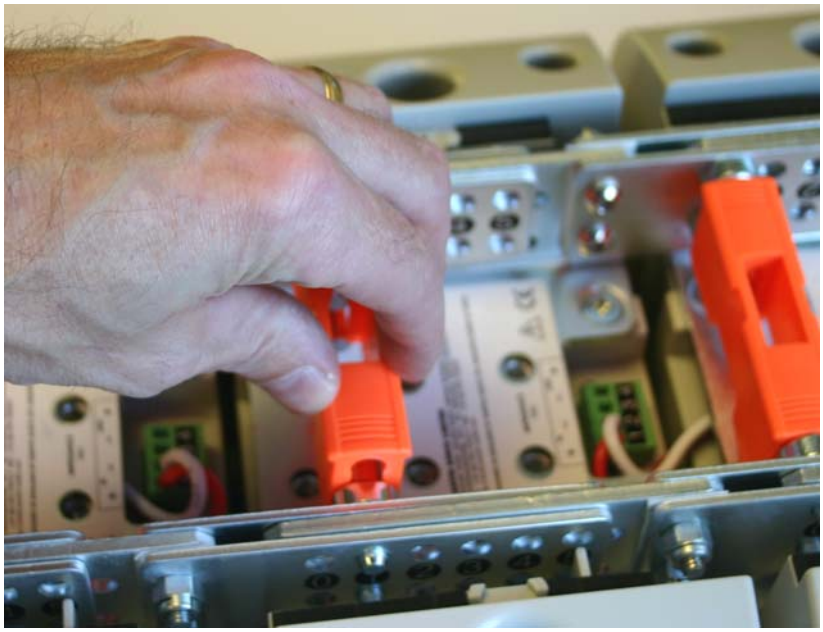


Adding the linking pins

4) Add the linking pins as shown in section 5.2 earlier.

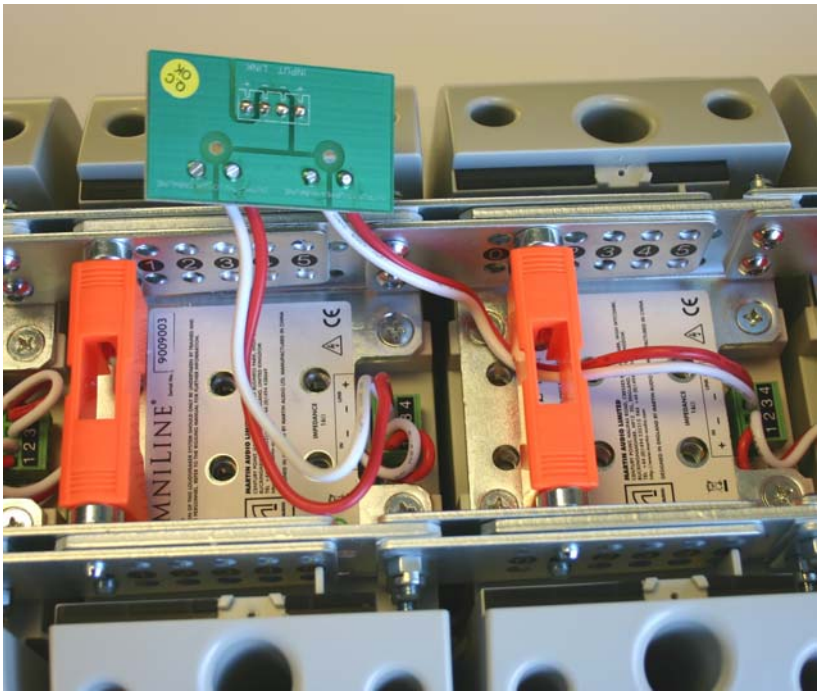
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5) Remember to add the safety clips!



6) Wire the 4-module blocks together into bigger blocks of 8 or 12 modules* using the connector pcb supplied with each block of four OmniLine® modules.

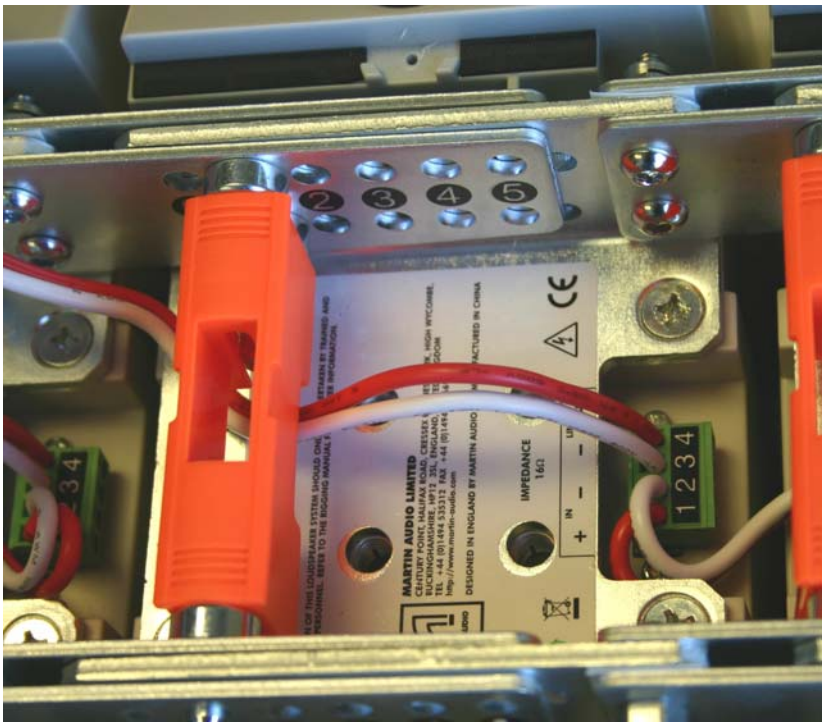
* See separate document entitled ***Powering your Omniline***® for further details.



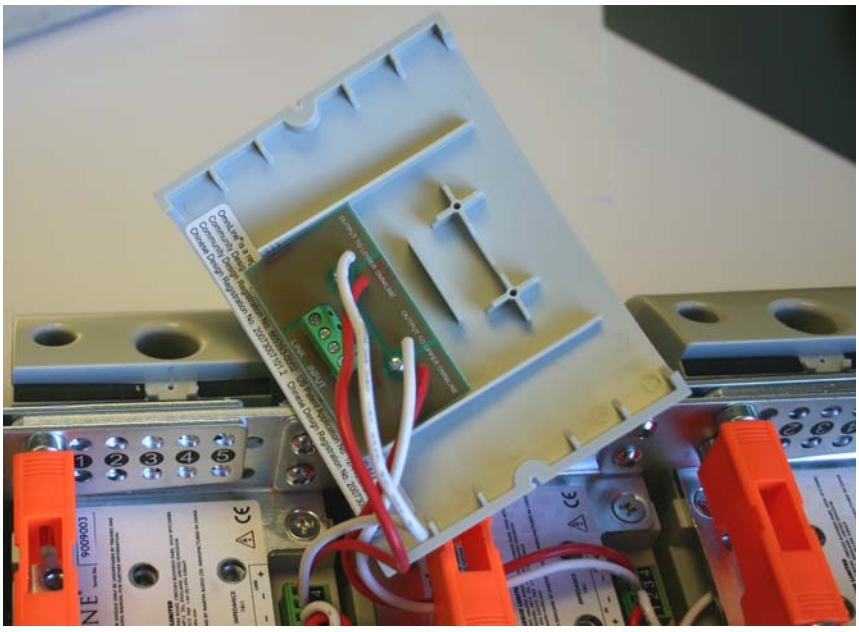
Notes:

- White = -ve and Orange = +ve
- Upper and lower block connections are marked on the pcb.
- Route the wires between the linking pins to avoid crushing them when the rear covers are replaced.

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7) Screw the pcb to the inside of the most convenient rear cover using the self tap screws provided with each set of four modules. Its orientation will depend on that module's linking pin positions.

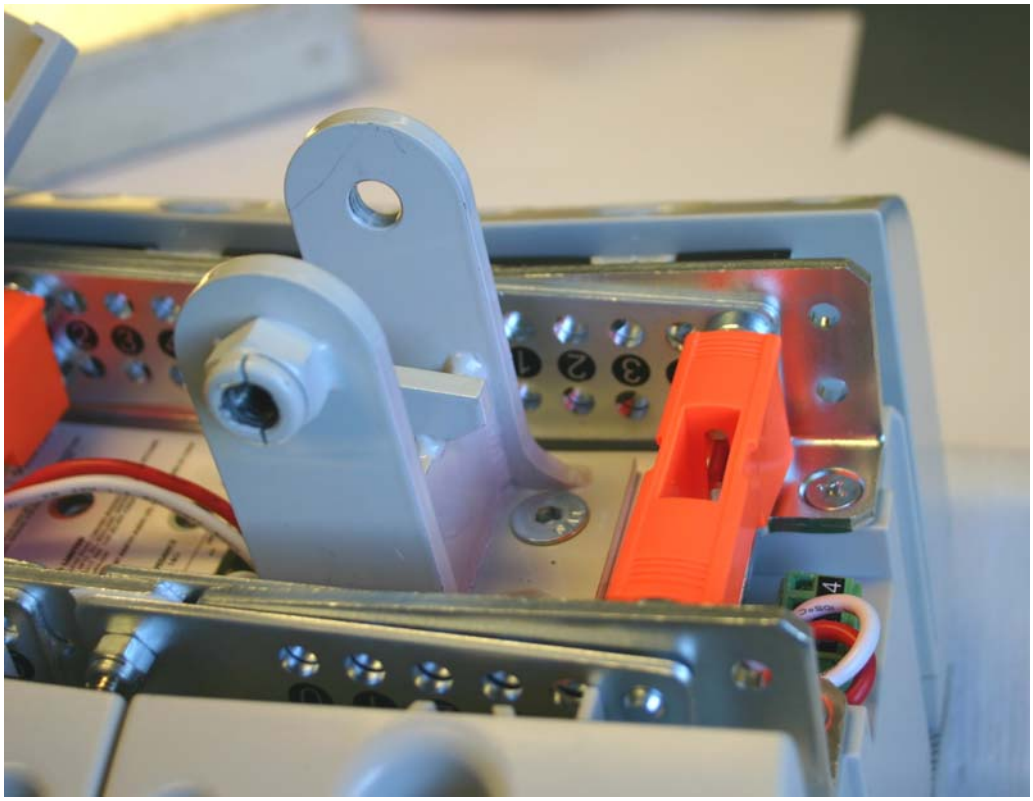


7.2
Fit the U-bracket to the lower OmniLine® module first – and then the linking pins.

Final U-bracket positioning will be determined by the required linking pin positions – one position for 0-2 degrees and the other position for 3-5 degrees. See illustration below…

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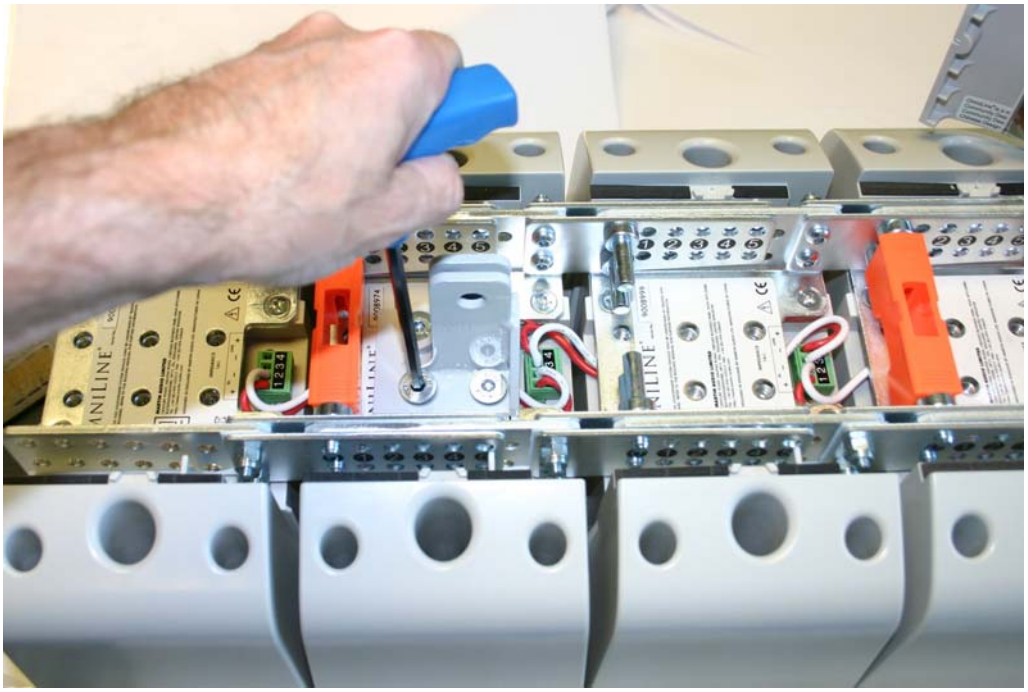
Once you have fitted the U-bracket, angle the lower module to the required setting, ensuring the holes line up, then replace all four linking pins and the safety clip – ***see section 5.2 earlier.***



U-bracket positioned for 5 deg lower module angle

7.3

Fit a main HAM03192 tie-bracket to the Omniline® module indicated by the Omniline® software.



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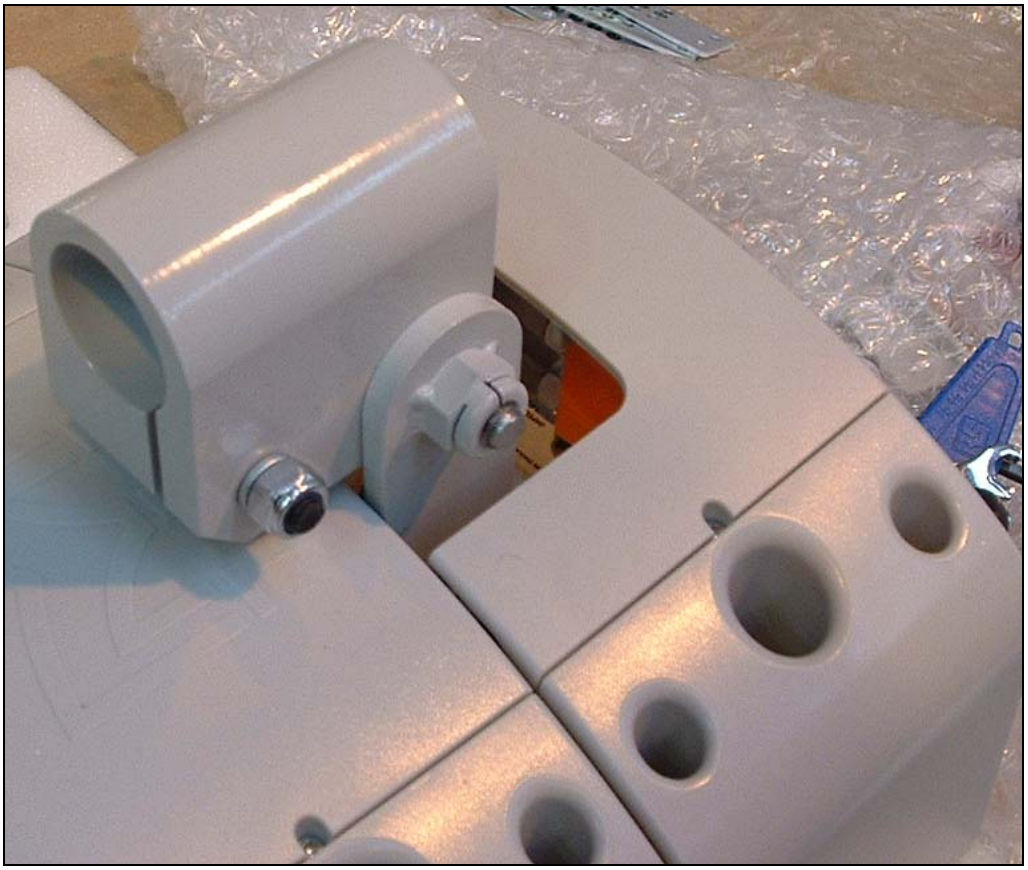
Again, the bracket position and orientation will be determined by the angle setting required for that Omniline® module.

Remove the linking pins if necessary and fit the bracket in the correct orientation. Angle the Omniline® module and replace the linking pins at the required angle.

7.4
Fit the second HAM03192 tie-bracket, to the top Omniline® module.

7.5
Refit the lids

7.6
Fit the Collar to the U-bracket using the M10 x 65 Cap Head Machine Screw, in the orientation shown below.

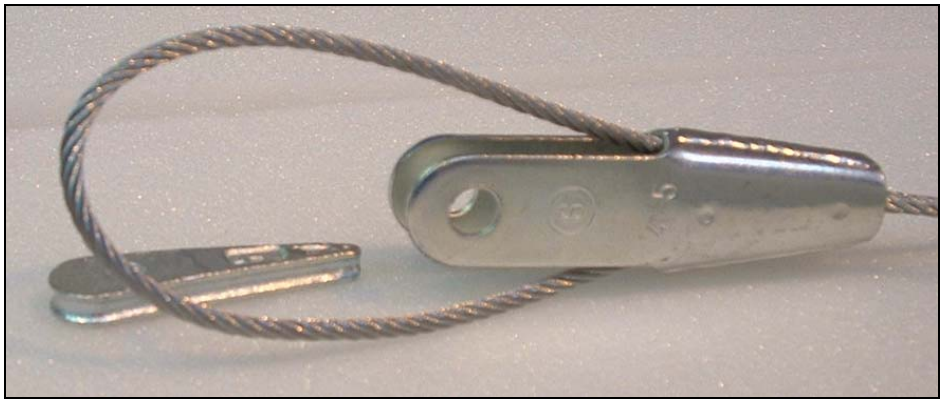


Tip!
Leave the U-bracket screw (right above) and clamping screw (left above) finger tight until the system is mounted onto the wall bracket – remembering to tighten them fully at that stage.

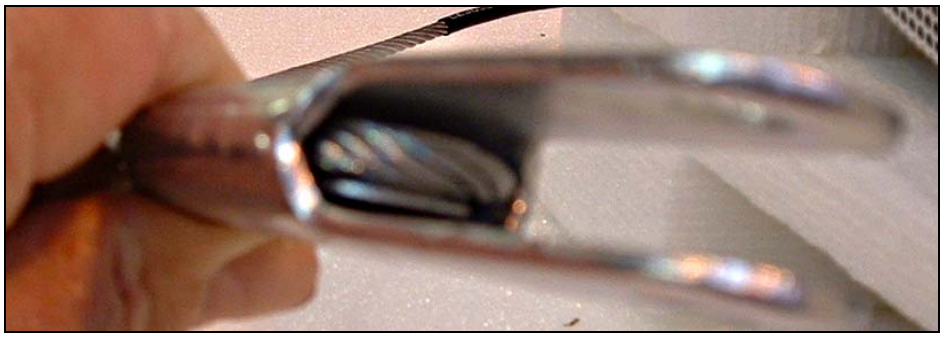
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7.7

After removing the pin and R-clip from the DIN15315 wedge fastener, load the ASF20024 wire rope as follows:



Place a loose loop of ASF20024 wire rope into the wedge socket



Loop the wire round the wedge and pull it semi-tight

Attach the Wire Rope assembly to the ***main*** tie bracket using the pin and R-clip. Note the R-clip washer.



Roughly adjust the length of the wire using the wedge socket.

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7.8
Fit the top HAM02027 and bottom HAM02026 wall brackets onto the wall using the drilling templates included with the brackets.



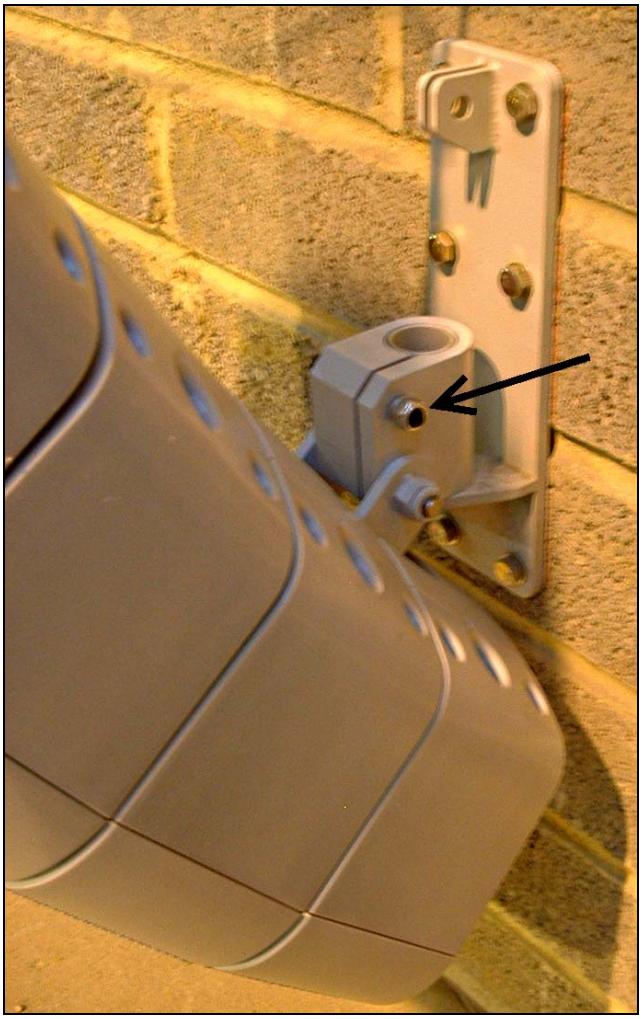
HAM02027



HAM02026

The Omniline® software will indicate the recommended heights of these brackets.

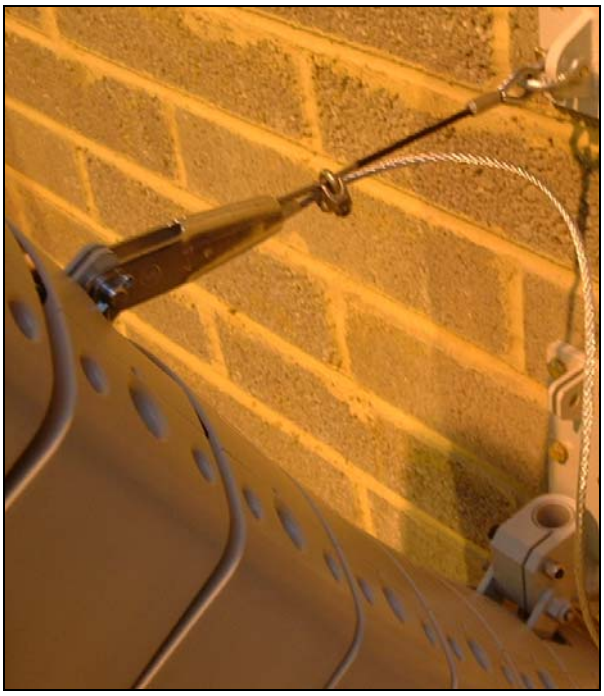
7.9
Lift the array and slot it down onto the bottom bracket



Tighten the clamp screw (arrowed).

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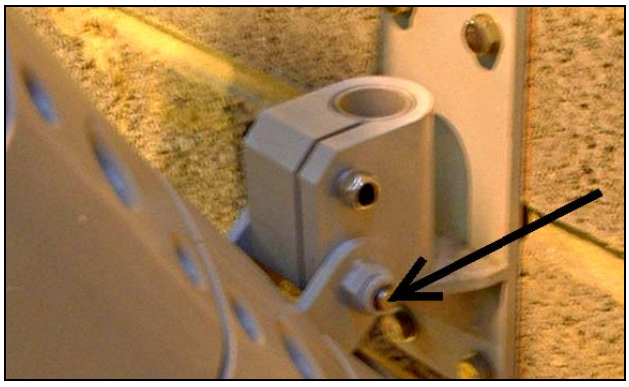
7.10
Shackle the end of the wire rope to the top wall bracket.



7.11
Use the wedge socket to fine tune the down tilt of the array. Once the angle is set, add the DIN1142 rope grip for extra security and make sure everything is tight.

Trim the wire rope if required.

7.12
Tighten the U-bracket-to-sleeve screw (arrowed)



Add a safety wire rope between the second (top) tie-bracket and an approved, secure part of the building structure.

Recheck everything!
ALLWAYS double check that all Orange safety clips are in place as this is essential to ensure that the array will stay safely locked together

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8 Omniline® flying system

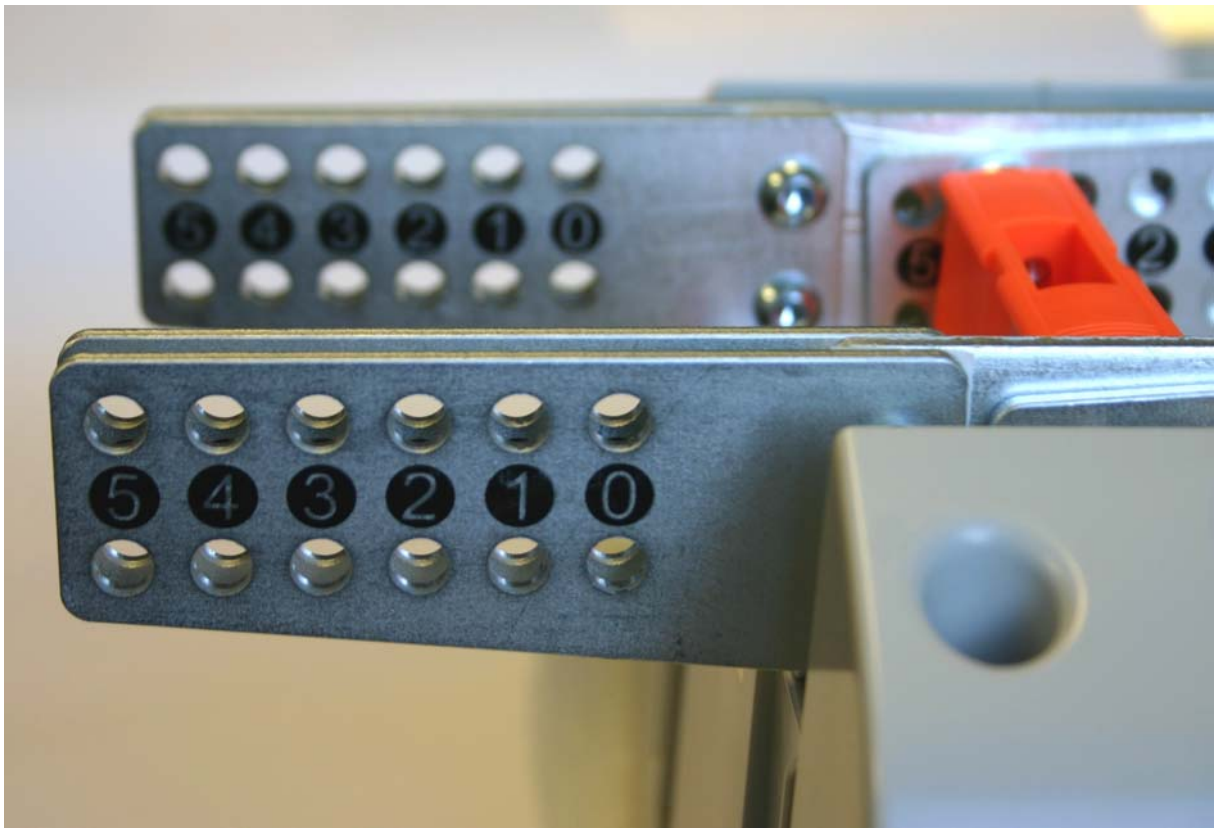
To remind you:

- Martin Audio Omniline® loudspeakers must be installed by experienced loudspeaker installation personnel using the full installation kit provided
- It is the installer's responsibility to ensure that all relevant local, national and international electrical, fire and building safety regulations are complied with
- Every Omniline® loudspeaker must be fitted with an additional steel safety wire this can be fitted between the HAM03192 tie bracket and an approved supporting structure.

8.1

1) Prepare your 4-module blocks to the splay angles recommended by the OmniLine® software ***– see section 5.2 earlier.***

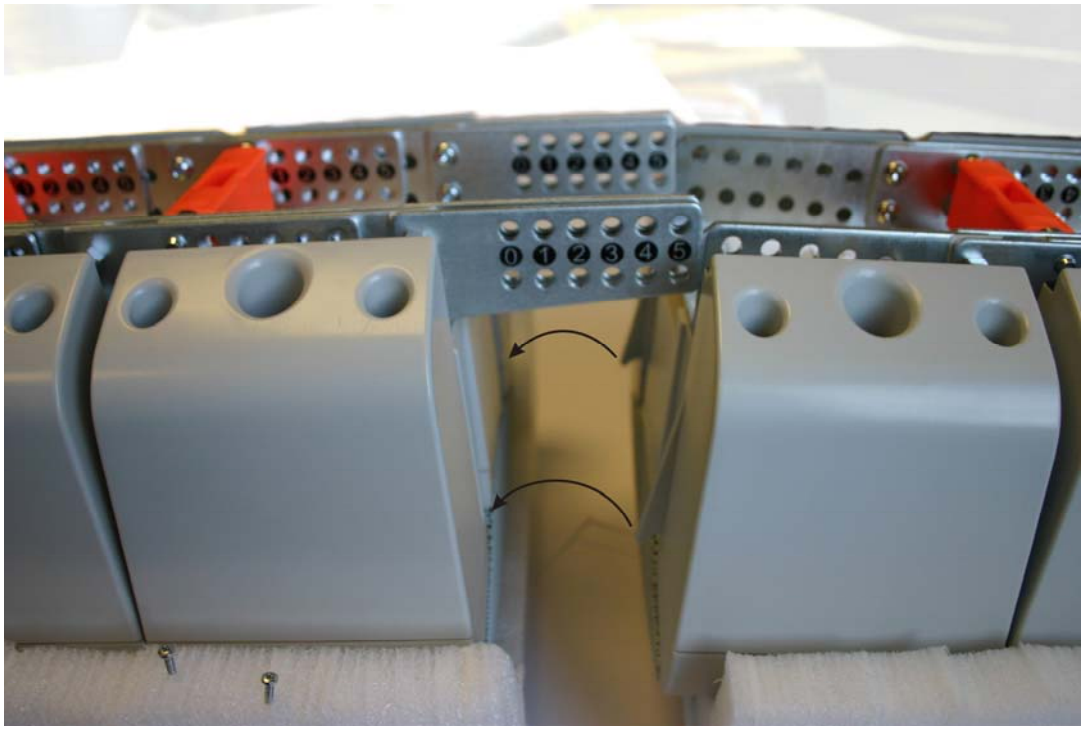
2) Add link plates to the lower module of the upper 4-module blocks using the link plate bolts and lock nuts supplied with each four OmniLine® modules – see kit picture at the beginning of this document.



Fit link plates (supplied with each four modules)
to the bottom of each block of four

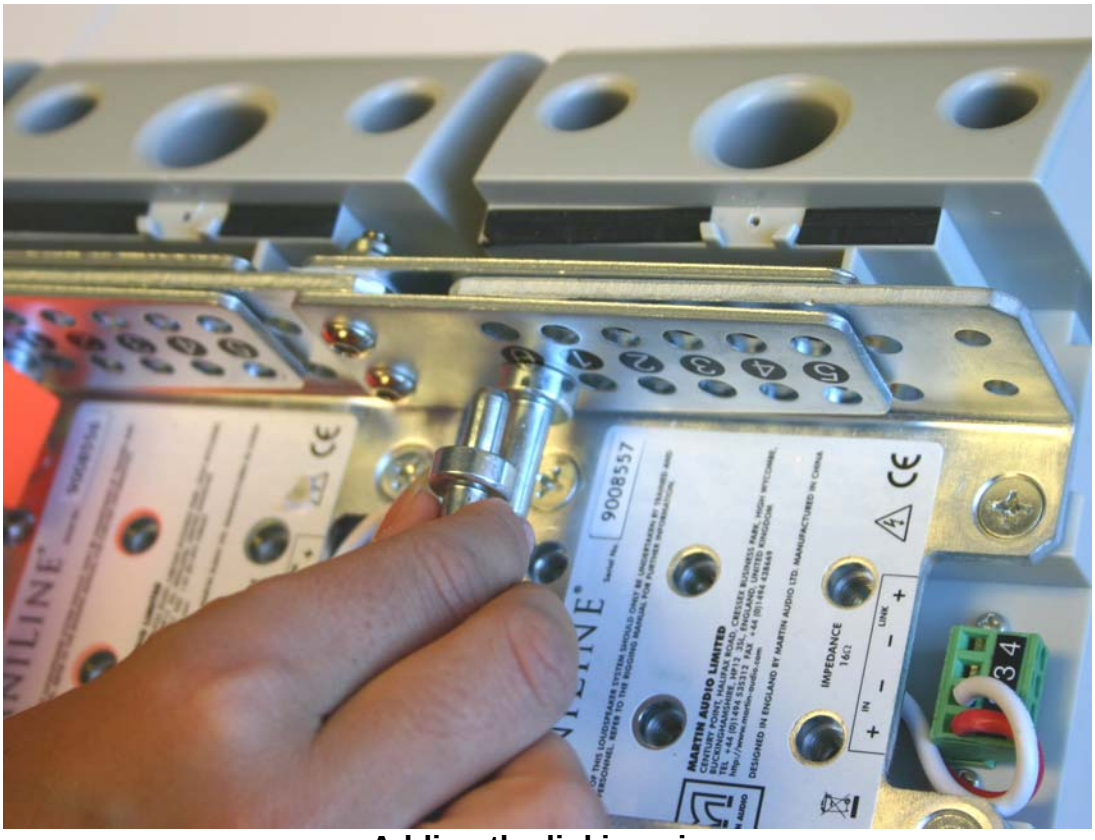
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3) Fit 4-module blocks together by interlocking modules together near the front.



Interlock modules together

Ensure that the tongues (right) are properly locked into the grooves (left) – see arrows in above illustration…

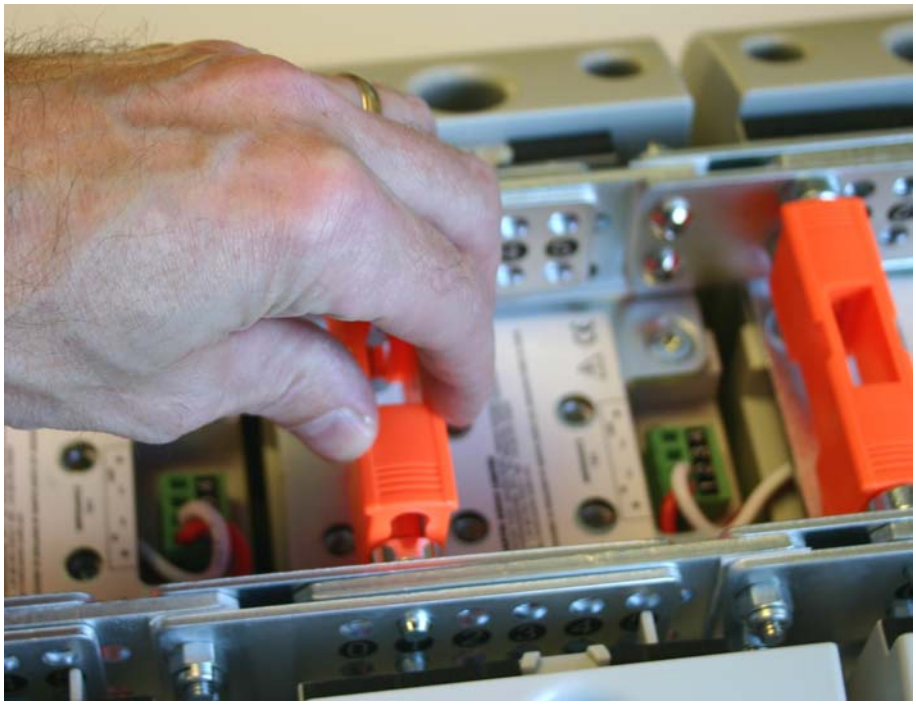


Adding the linking pins

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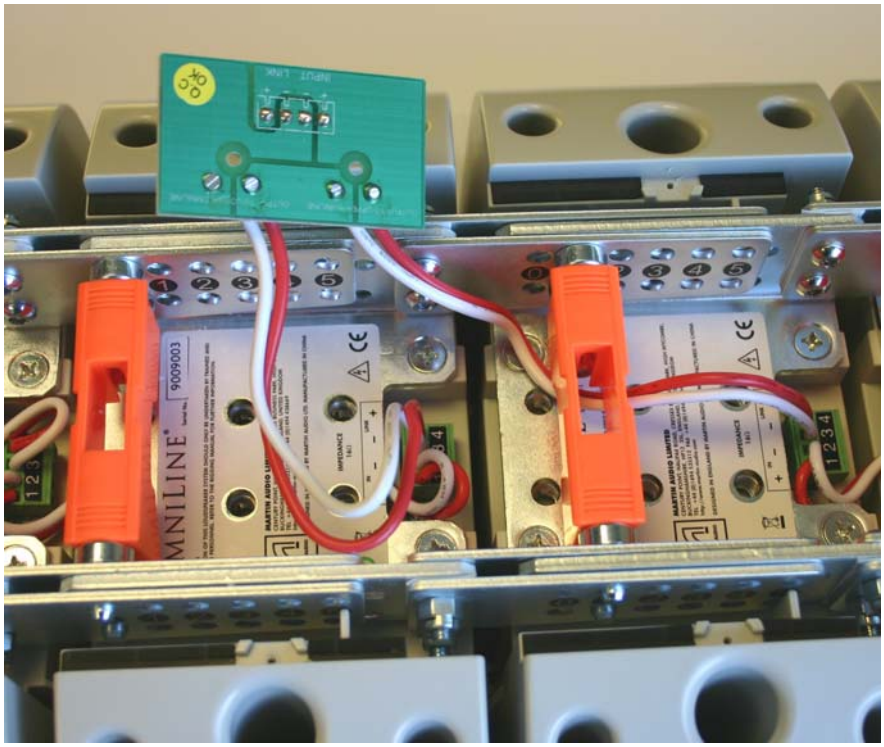
4) Add the linking pins as shown in section 5.2 earlier.

5) Remember to add the safety clips!



6) Wire the 4-module blocks together into bigger blocks of 8 or 12 modules* using the connector pcb supplied with each block of four OmniLine® modules.

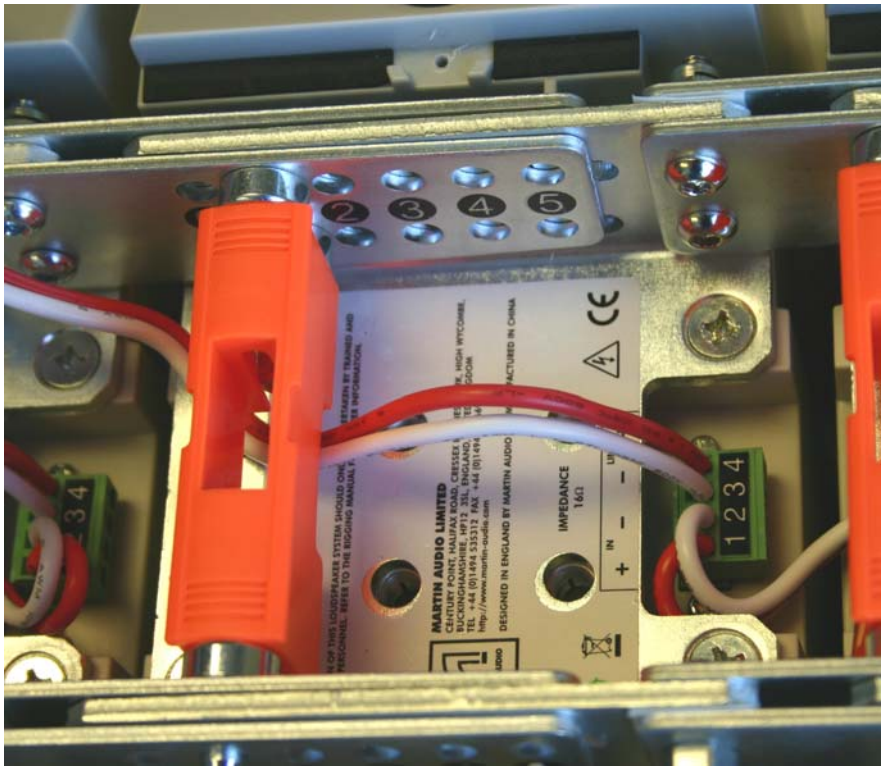
* See separate document entitled ***Powering your Omniline***® for further details.



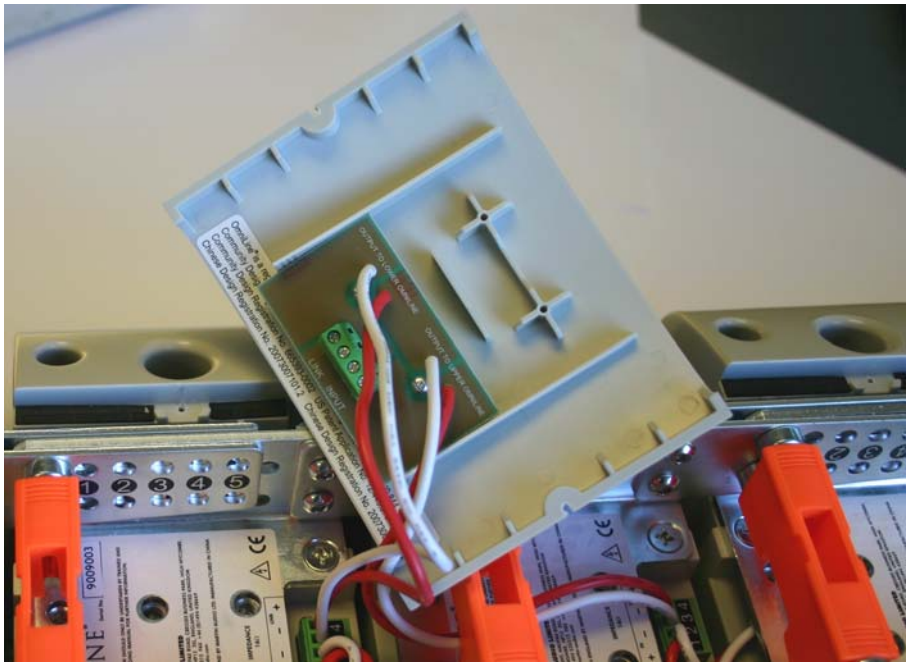
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Notes:

- White = -ve and Orange = +ve
- Upper and lower block connections are marked on the pcb.
- Route the wires between the linking pins to avoid crushing them when the rear covers are replaced.

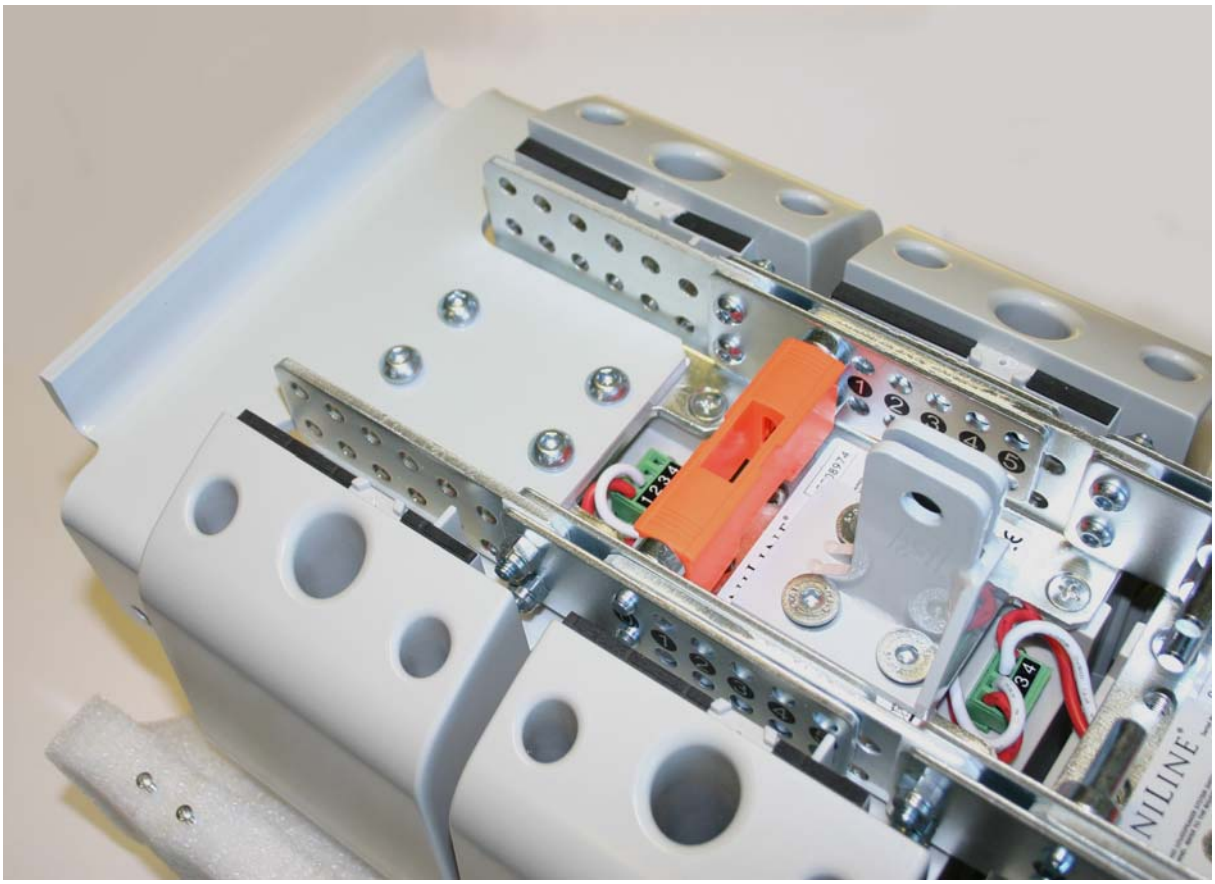


7) Screw the pcb to the inside of the most convenient rear cover using the self tap screws provided with each set of four modules. Its orientation will depend on that module's linking pin positions.



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8.2
Fit the HAM03191 flying bracket (arrowed) to the top Omniline® module of the array.

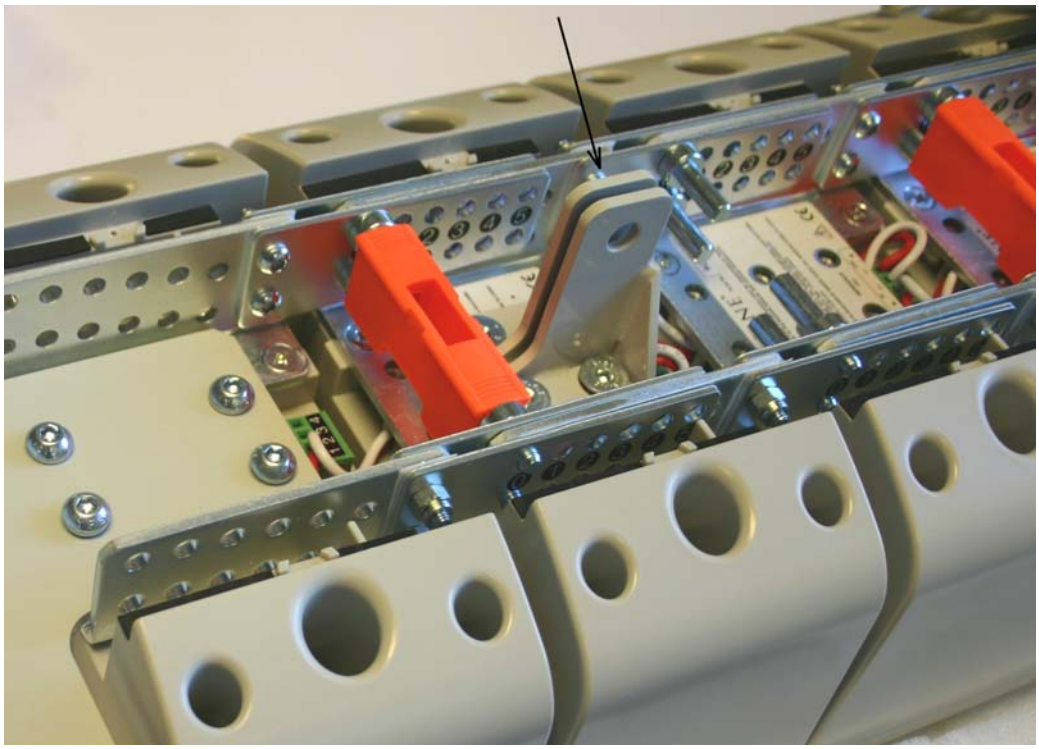


HAM03191 flying bracket (arrowed) in place

8.3
Fit one of the HAM03192 tie brackets to the second module from the top of the array to form a safety point.

The position and orientation of the bracket will be determined by the angle setting of the Omniline® module to which it is fitted. Attach the bracket – temporarily removing the linking pins if necessary.

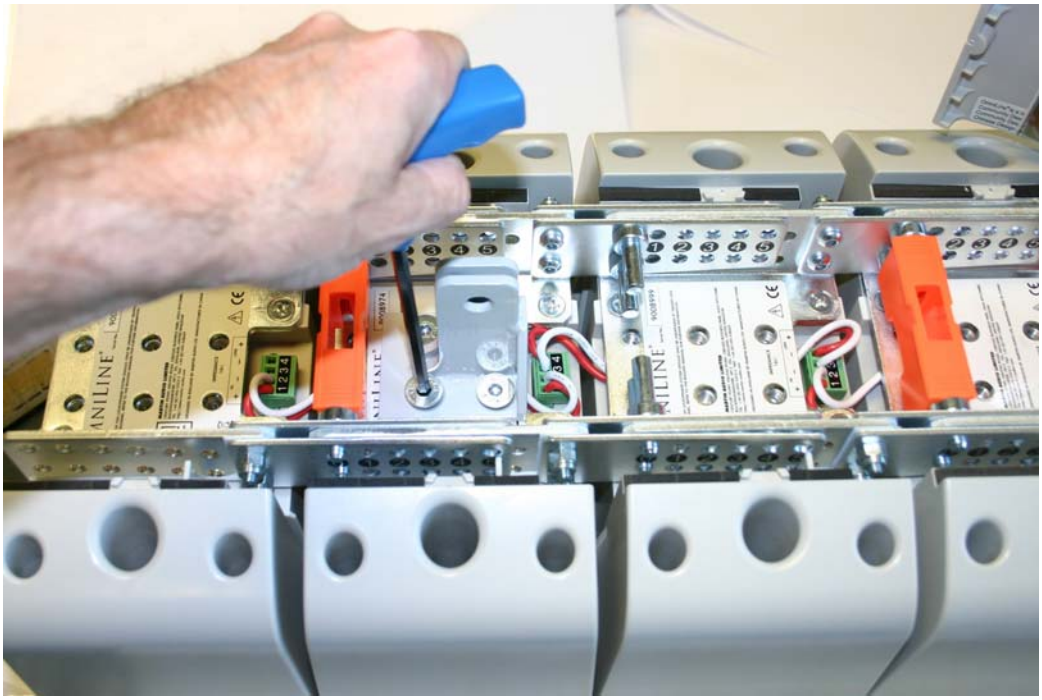
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HAM03192 tie bracket in place

8.4

Fit the second HAM03192 tie-bracket to the Omniline® module indicated by the Omniline® software.



Again, the bracket position and orientation will be determined by the angle setting required for that Omniline® module.

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Remove the linking pins if necessary and fit the bracket in the correct orientation. Angle the Omniline® module and replace the linking pins at the required angle.

8.5
Refit the rear covers

8.6
Employ a professional rigger to rig the system from the HAM03191 flying bracket at the front and the lower HAM03192 tie brackets at the rear.

8.7
Add an extra safety wire rope between the top tie-bracket and an approved, secure part of the building structure.

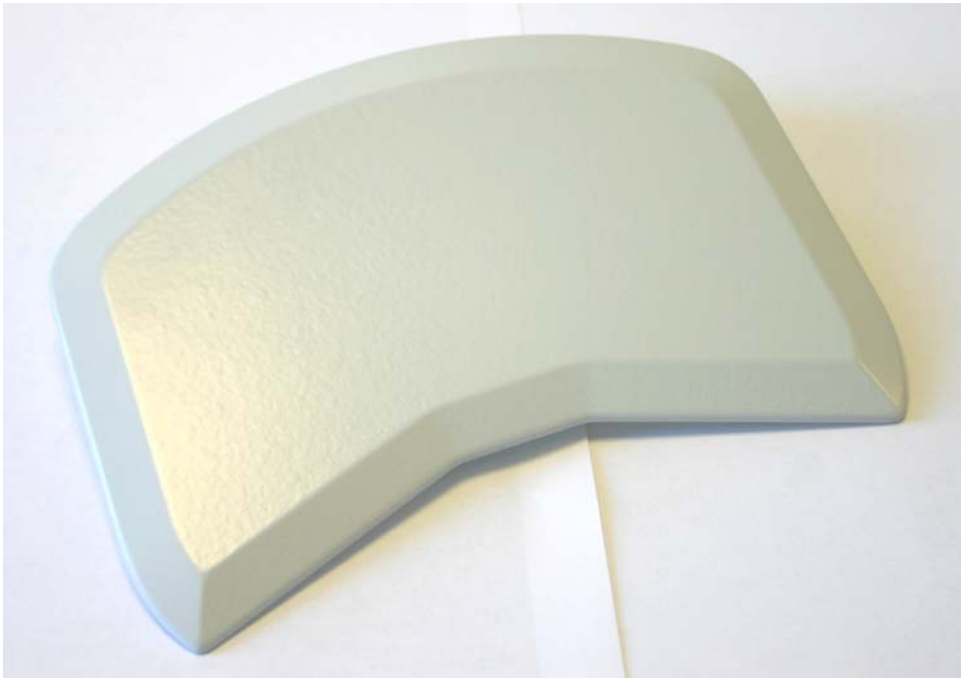
Recheck everything!

If you are inexperienced, or in any doubt at all, get an independent safety check.

ALLWAYS double check that all Orange safety clips are in place as this is essential to ensure that the array will stay safely locked together

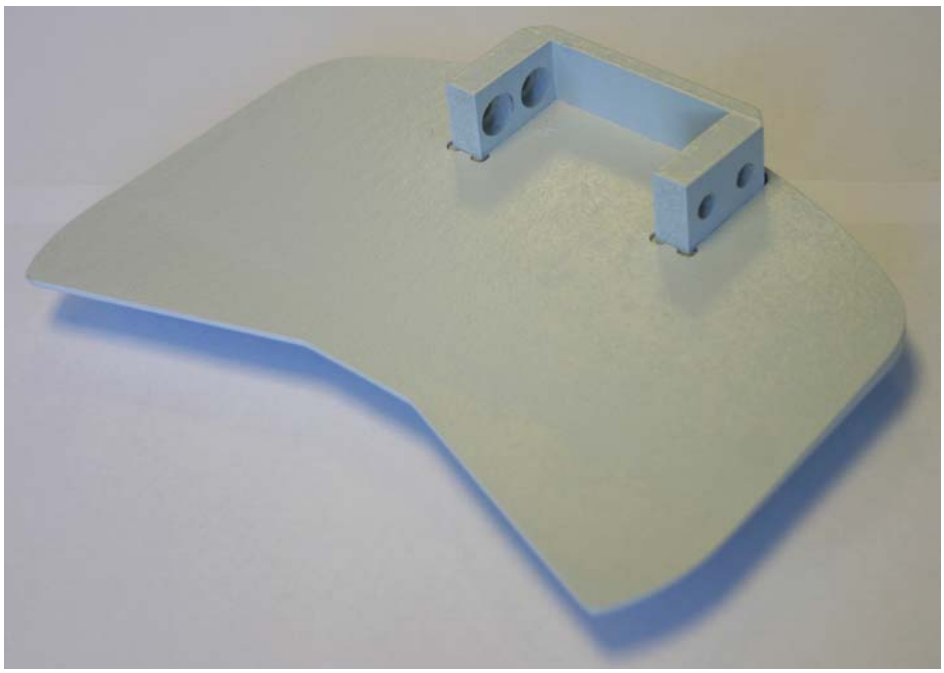
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9. Omniline Bottom Cover



The Omniline Bottom Cover Plate

An Omniline array can be finished off with the addition of the optional Bottom Cover which fits to the base of the lowest OmniLine module in the array to give a very neat finish. This may not be necessary for wall mounted arrays but is often essential for flown arrays where the bottom of the array is often visible.



Bottom Cover mounting detail

The bottom cover is fitted via the raised mounting bracket on the inside of the cover which lines up with the holes on the Omniline bracket which are normally used to attach the linking plates. It uses the same nuts and bolts as the linking plates, you will

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always have a set of these left over as each block of four Omniline Starter Kits has a set to connect to the modules underneath it. Obviously the bottom modules have nothing connected to them!

9.1
You will need the back cover of the lowest Omniline module removed ready to fit the cover

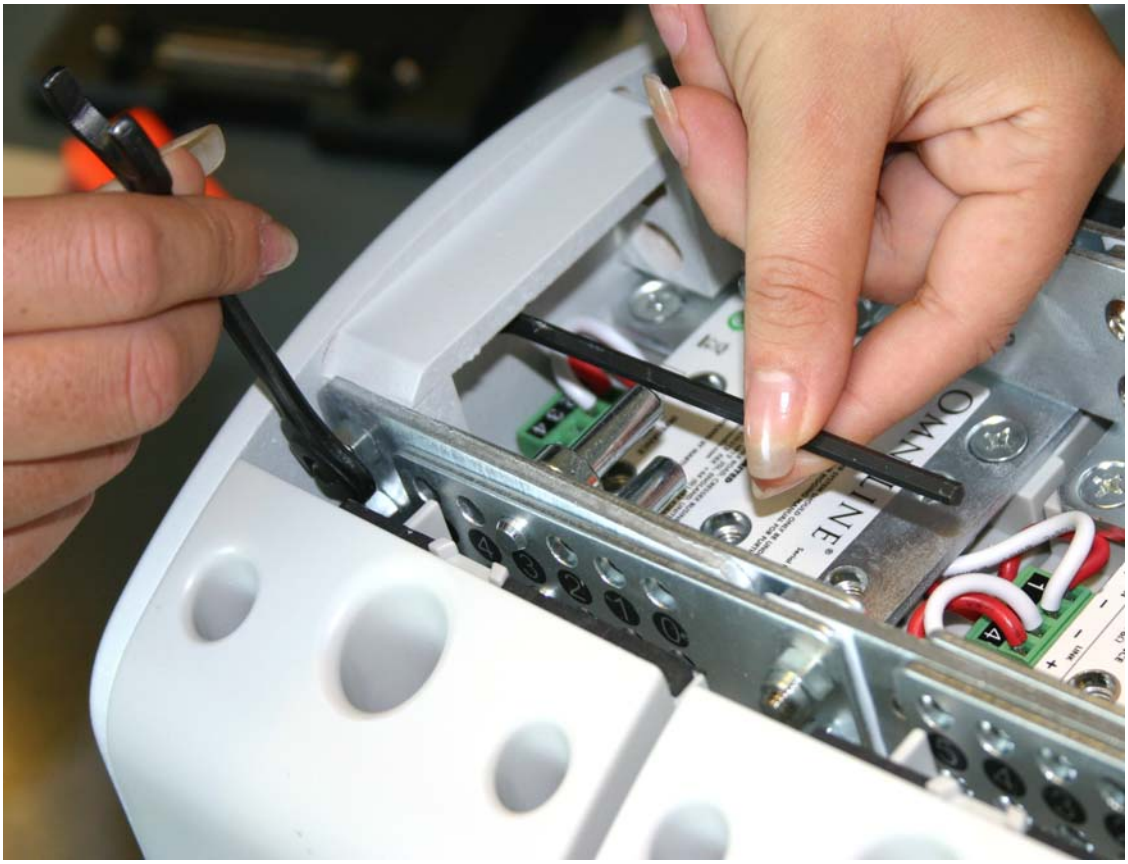


Tip!
Remove the covers and the orange safety clips from the bottom *two* modules as this will make it much easier to fit the Allen key into the bolts to tighten them up

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9.2

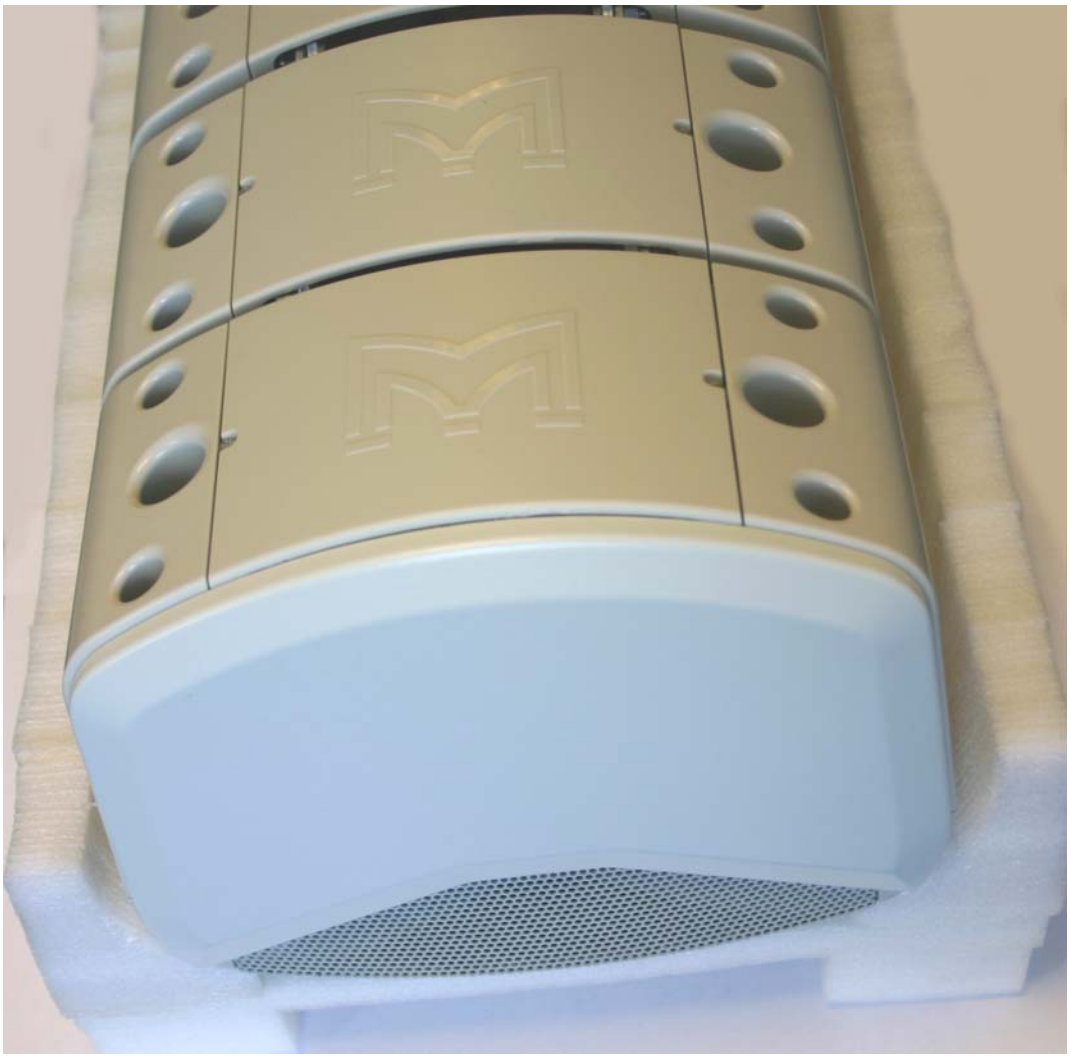
Position the bottom cover in place under the lowest module. You will find that the mounting bracket will fit snugly between the Omniline steel brackets and the holes will line up with the linking plate holes. Fit the spare linking plate nuts and bolts starting with the lowest two and tighten with a 4mm Allen Key and a 10mm open ended spanner



Tighten the fixing nuts and bolts

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9.3
REPLACE ANY SAFETY CLIPS THAT YOU REMOVED!, then replace the backs of the modules. The system is now ready to be flown.



System ready for flying with bottom cover fitted

Recheck everything!

If you are inexperienced, or in any doubt at all, get an independent safety check.

ALLWAYS double check that all Orange safety clips are in place as this is essential to ensure that the array will stay safely locked together

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