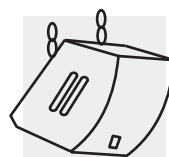
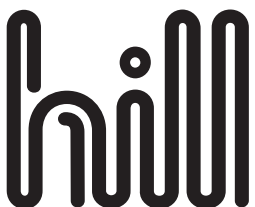
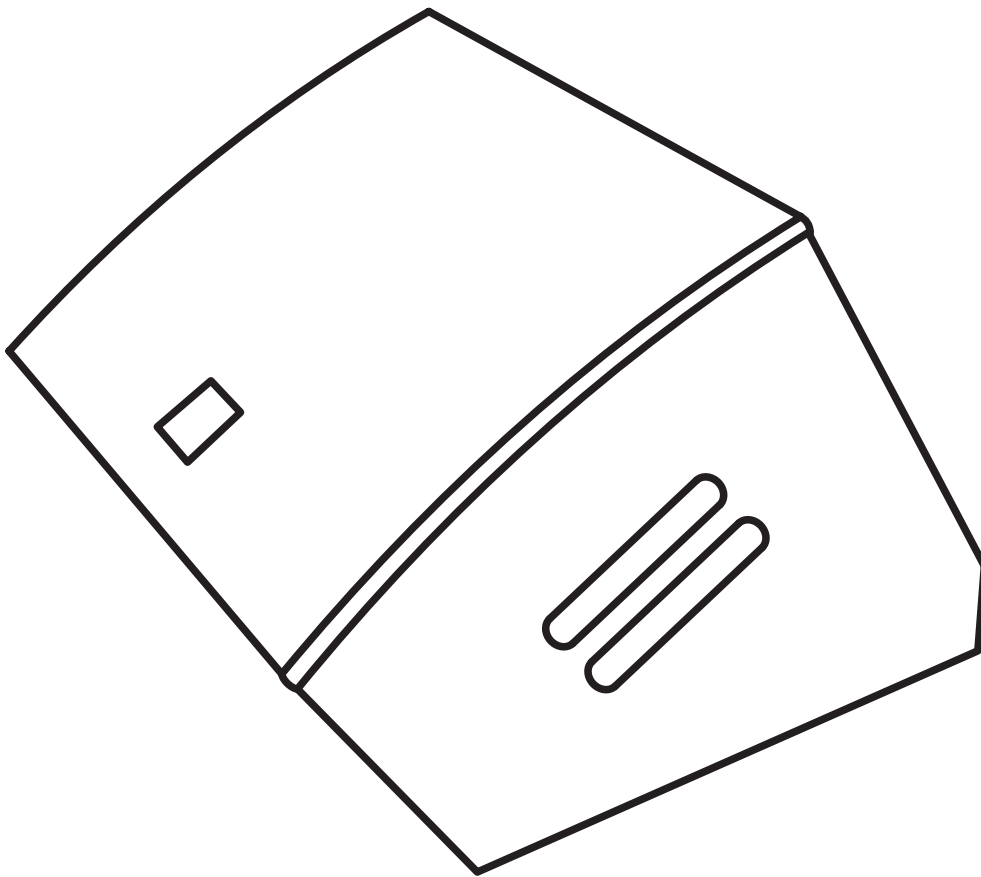


# M - Series

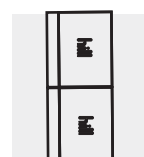
## M1 Active Coaxial Enclosure

USER MANUAL

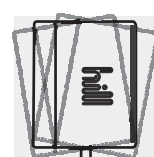
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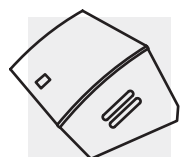
fly



stack



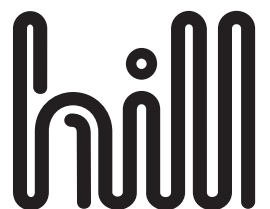
stand



floor

# Contents

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# Welcome

Thank you for purchasing the a Hill Speaker Systems M-Series Speaker:  
Hill M1 Active Coaxial Enclosure

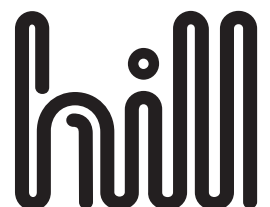
Please take time to read this manual to ensure that you install and operate the speaker correctly and in the right environment.

We are always creating and adapting new products and reserve the right to change the specification of the product and the content of this manual without prior notice. We highly recommend you check the website on a regular basis for important updates and information.

[www.hillspeakersystems.com](http://www.hillspeakersystems.com)

# Important Safety Instructions

1. Read these instructions.
2. Keep these instructions in a safe place.
3. Heed all warnings and follow all instructions.
4. Do not use this apparatus near water.
5. Clean only with dry cloth.
6. Do not block any ventilation openings if fitted.
7. Install in accordance with the manufacturer's instructions.
8. Do not install in the primary radiating area of any heat sources including central heating, stoves and any other apparatus that produces heat.
9. Do not defeat the safety purpose of the grounding-type AC plug(if fitted). If the provided plug does not fit into your outlet, consult an electrician for replacement of the outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments and accessories specified by the manufacturer.
12. To fly, hang, mount, install, move, transport or lift only use products specified by the manufacturer, or sold with the apparatus.
13. When using a dolly take extra caution when moving the cart/apparatus combination to avoid injury or damage.
14. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.



16. To completely disconnect this apparatus from the ac mains, disconnect the blue power supply cord plug from the AC receptacle.
17. WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.
18. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
19. M-series loudspeakers are capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution should be taken to avoid exposure to high SPL.
20. The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated. "Dangerous Voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



21. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.



# Precautions of Operation

## Stand Mounting Safety Precautions

The Hill M1 Active Coaxial Enclosure has an adjustable fitting that is designed to receive a 35mm pole or speaker stand. When using stands or poles, be sure to observe the following precautions:

- Check the stand or pole specification is designed to support the weight of the speaker.
- Always read all safety instructions specified by the manufacturer of the speaker stand.
- Always verify that the stand is erected on a flat, level and stable surface following the manufacturers instructions.
- Ensure that the cables to and from the speaker do not present a hazard. Safely secure all cabling so the speaker cannot be pulled over.
- Do not attempt to mount more than one Hill M1 Active Coaxial Enclosure on a stand or pole.
- Always be extra cautious in an outdoor environment.
- Always conform to HSE Manual handling procedures when lifting any of the Hill Speaker Systems products.

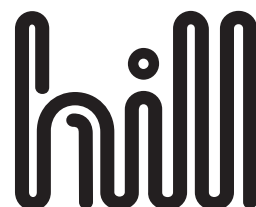
## Operating Temperature

The M1 amplifier is designed to use convection cooling. In the rare event of over-heating it will automatically switch into protection mode and mute the audio. When the internal temperature has returned to within operating range it will turn back on.

*Please note: The conditions under which this may occur are:*

- *When the system is operated in very high ambient temperatures.*
- *The amplifier panel and the bottom of the box are in continuous direct sunlight.*

*To prevent activation of the amplifier protection mode always ensure adequate cooling and appropriate shade.*



# Back Panel Guide

## 1. Signal input

This is a female XLR connector which allows you to connect a balanced input from your processor/desk.

(pin 1 Ground, pin 2 + Hot, pin3 - Cold).

## 2. Signal output (link)

This is a Male XLR connector which allows you to daisy chain up to 8 units together.

(pin 1 Ground, pin 2 + Hot, pin3 - Cold).

## 3. Power input

This is a blue Neutrik Powercon® connector which provides the AC power input.

## 4. Power output (link)

This a white Neutrik Powercon® connector which allows you to daisy chain up to 8 units together. *Please note: The powercon connector requires a clockwise locking twist.*

## 5. Power button

This is a green push button which illuminates when depressed (with AC connected).

## 6. Peak indicator

This LED lights up when the amplifier is delivering peak power.

**Warning:** *If peak output is reached, reduce input level to avoid stress to the internal components.*

## 7. Application Setting Switch (only fitted to early models)

This switches between two settings: 1. Full range

2. Bass cut

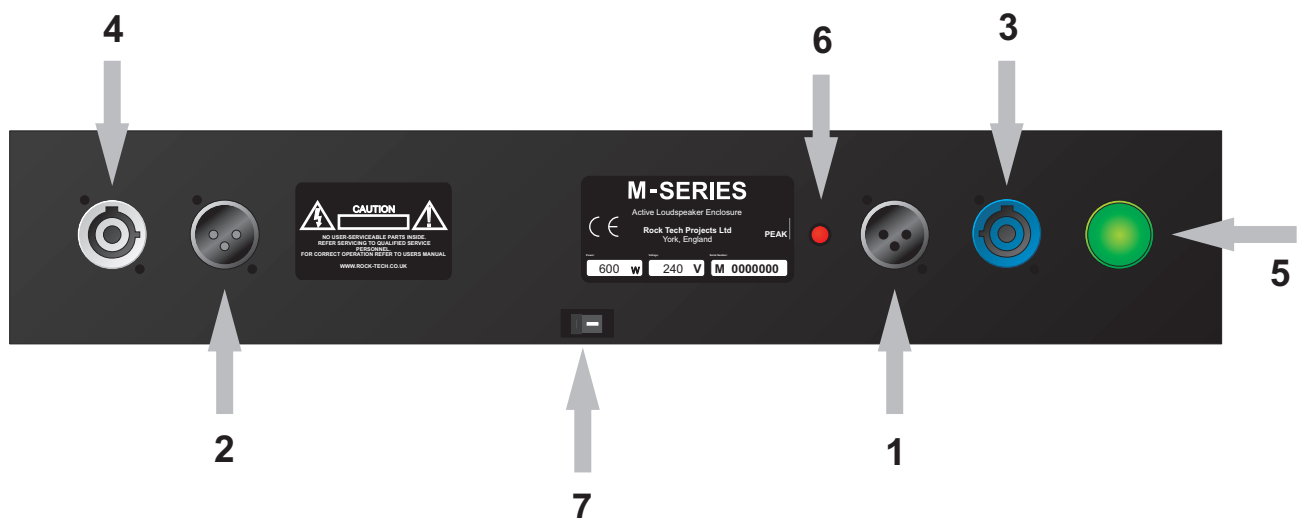


Fig 1. M1 Back Panel

# Application Examples

## Stand Mounted with Adjustable Top-Hat

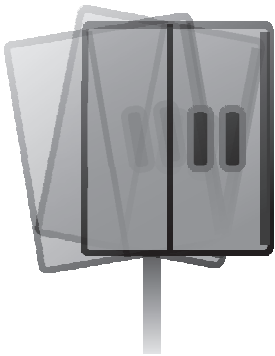


Fig 2. Three top-hat positions.

The adjustable top-hat allows the vertical angle to be adjusted in increments of 4deg ( $\pm 16$ deg).

This gives precise control over front to back coverage for flat seated, balcony and raked seating layouts.

## Stage Monitor with Adjustable Angle

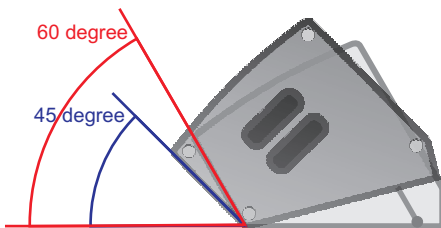


Fig 3. The two angles for the M1 as a monitor

Underneath the M1 box is a recessed sprung loaded handle. This is used to adjust the angle of the speaker when used as a stage monitor. It can be set at either 60deg or 45deg.

At 60deg it is perfect for use close to a microphone stand, with less spill between monitor positions. If the musician prefers to move around more and requires the mix to travel further upstage, then the angle can be reduced to 45deg.

## Flown Individually or as a Cluster

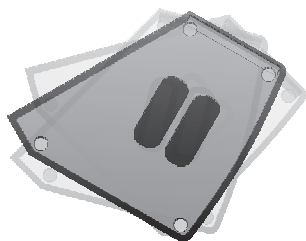
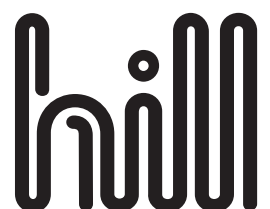


Fig 4. Three angles for the M1 when flown

The M1 is designed for three flying options, each of which can be mounted into the rigging slot:

- Industry Standard Aero-Track
- Unistrut Channel
- M6 Eyebolt

*Warning: Only use Hill Speaker Systems hardware, Incorrect bolt lengths may damage the amplifier, and not be suitable for flying.*





# System Examples

All systems shown are examples and can be modified to your individual needs. The sub bass unit illustrated is the Hill M1SB Active Bass Enclosure from the Hill M-Series.

## Music play back / Conference system (2 x M1)

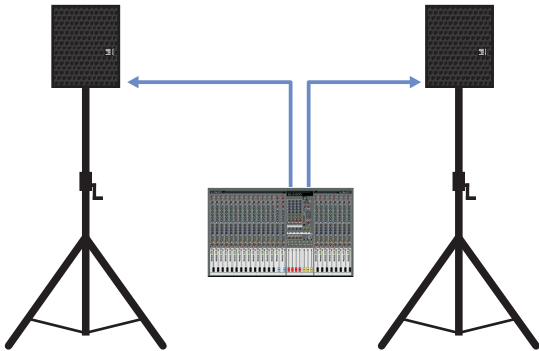


Fig 5. 2 x M1 on speaker stands

This system is ideal for a small music venue or a conference system. Take your Left and Right feeds from the 'front of house' (FOH) desk on xlr and plug them into the M1s. The system can be configured in mono by using a single feed from the FOH and simply linking the units together.

## Music playback with sub reinforcement (2 x M1 + 1 (or 2) x M1SB)

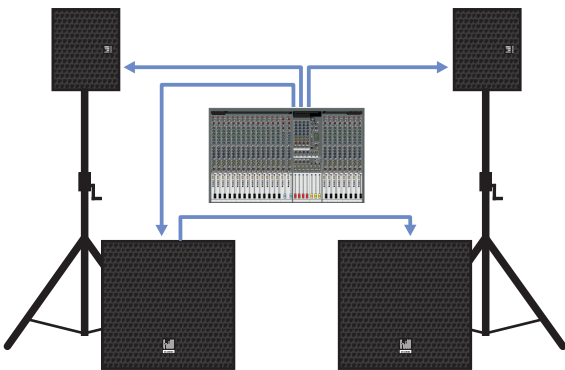


Fig 6. 2 x M1 on speaker stands with M1SB reinforcement

This system is ideal for a DJ venue. Take your Left and Right feeds from the FOH desk (xlr) and plug them into the M1s. You can then link the M1SB directly from the M1s.

If the FOH desk has an aux or mono feed you can plug that into the M1SB for enhanced bass performance. Remember you can always link the M1SBs together if you only have one output. (refer to FOH desk owners manual).

## Live music with sub reinforcement, monitors and cross-over (4 x M1 + 2 x M1SB)

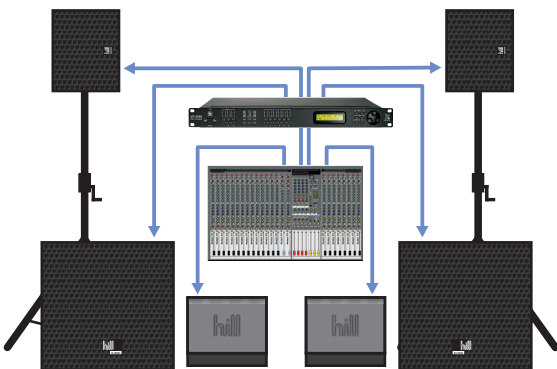


Fig 7. 2 x M1 on speaker stands with M1SB reinforcement and M1 monitors

This system is ideal for a live music venue. Take your Left and Right top feeds from the HF outputs on the cross-over and plug them into the M1s. Take your Left and Right sub feeds from the LF outputs on the cross-over and plug them into the M1SB. Set the cross-over to 100Hz, 24dB per octave. Take aux feeds and plug them into the M1 monitors, as required.

# Accessories

For more products and prices please visit [www.hillspeakersystems.com](http://www.hillspeakersystems.com).

## Speaker Stand



Speaker stand for loads up to 40kg  
Black finish  
Variable height adjustment via hand-crank  
Circular steel tube  $\varnothing$  35mm  
Maximal height (to base of M1 speaker): 220cm  
Stand weight: 9.5kg

## Wall Mount Speaker Bracket



Wall mount speaker bracket with mounting pole.  
Black steel bracket with adjustable tilt  
Maximum load capacity: 40kg  
Bracket weight: 2.0 kg  
Length: 30 cm

## Combi Cable



Power and signal in one cable; The ideal linking cable.  
Available in 1m, 3m, 5m, 10m and 20m. Custom lengths available on request.

## Power Cable



Powercon cable - available in 1m, 3m, 5m, 10m and 20m lengths. Terminated in either 13A or 16A ceeform.

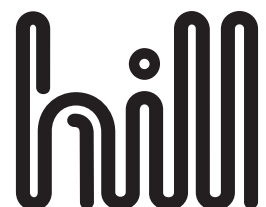
## Flying Pack



Flying pack utilising aero-track and double studs for directional adjustment of M1 flying system.

## Transport Cover, Flightcase and Wheel Dolly

A variety of transport protection solutions are available, please contact [info@hillspeakersystems.co.uk](mailto:info@hillspeakersystems.co.uk) for more information.



# Technical Specification

- Studio derived 12 inch coaxial driver: unique cooling system which provides minimal thermal compression. This allows the M1 to maintain its performance and clarity, even after many hours of continuous use.
- Neodymium compression driver with titanium diaphragm delivers natural transparency throughout the high frequency range.
- Ring radiator cone provides high definition resolution with seamless midrange.
- Internal studio specification power amplification system.
- Neutrik Powercon and XLR in / out, allowing upto 8 units to be 'daisy chained'.
- Adjustable angle top hat can be adjusted in 4° increments to +/- 16°.
- Rigging points: 4 x M6 lifting eyes (2 x 150mm 'cargo track' option).
- 4 x Rubber feet to protect delicate flooring (allows the 'cargo track' to be left in place).
- Manufactured from finest grade 18mm marine birch ply, stained and finished in semi-gloss black.
- Acoustic - foam backed perforated steel grille.
- Illuminated power switch, and red peak LED.

Frequency response	65Hz to 18kHz ± 4db
Dispersion	80 H x 60 V
SPL	135 dB peak @1m (138dB Crest factor 4)
Output power	800W
Dimensions	18"Wx15"Hx20"D <sub>monitor</sub> 15"Wx18"Hx16"D <sub>pole mount</sub>
Weight	27 kg

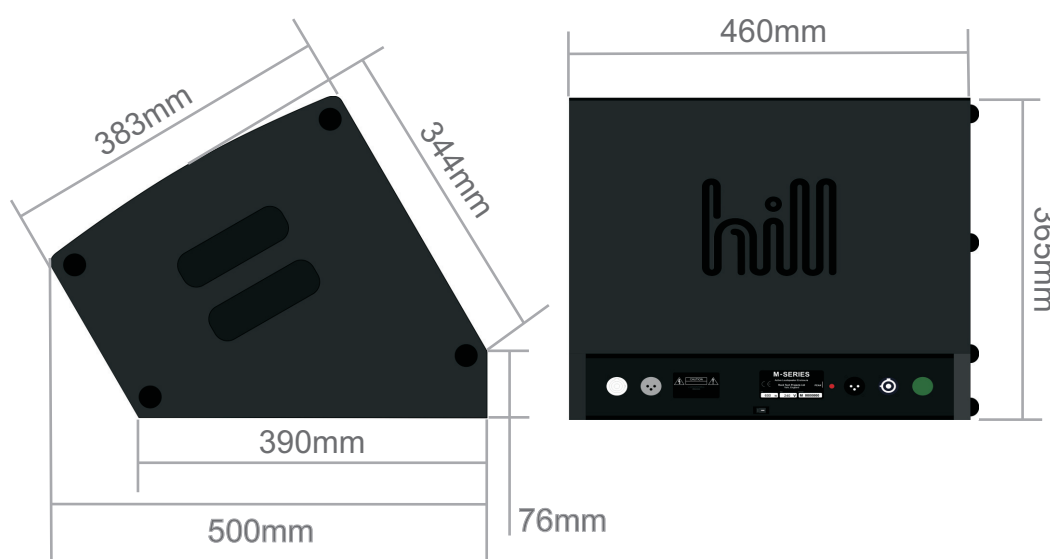


Fig 8. Dimensions

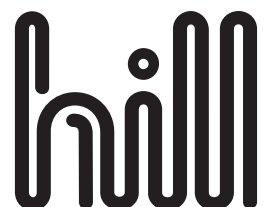
# Trouble Shooting

Symptom	Likely Cause
No sound	<ul style="list-style-type: none"><li>● Unit not connected to an active power source</li><li>● Unit not connected to an active signal source</li><li>● Faulty power or signal cable</li><li>● Overheating protection activated - cool for a few minutes</li></ul>
Active signal but no power indicated	<ul style="list-style-type: none"><li>● Unit not connected to an active power source</li></ul>
Hum/buzz	<ul style="list-style-type: none"><li>● Improper AC ground on system</li><li>● Ground loop on system</li><li>● Improper gain structure on system</li><li>● Hum/buzz from source signal</li></ul>
Peak Light on	<ul style="list-style-type: none"><li>● Driving system too loudly - reduce input level</li></ul>

## Maintenance

For any other problems or for general maintenance please visit our web site [www.hillspeakersystems.com](http://www.hillspeakersystems.com), or contact the retailer you purchased the product from.

Retailers Address
-------------------



# Warranty

**KEEP YOUR SALES RECEIPT SAFE.** Warranty is invalid if the original or a copy of the original receipt is not shown on point of inspection of the product.

A. The Company warrants all materials, workmanship and proper operation of this product for a period of five years from the original date of purchase with the following exception: electro mechanical components, including woofers and compression drivers, which are only warranted for two years. If any defects are found in the materials or workmanship or if the product fails to function properly during the applicable warranty period, The Company, at its option, will repair or replace the product.

B. Failure to register online or return the product registration card will void the five-year warranty.

C. Service and repairs of The Company products are to be performed only at a factory-authorized facility (see D below). Unauthorized service, repairs, or modification will void this warranty. To obtain repairs under warranty, you must have a copy of your sales receipt from the authorized The Company dealer where you purchased the product. It is necessary to establish purchase date and determine whether your The Company product is within the warranty period.

D. To obtain factory-authorized service:

1. Visit [www.hillspeakersystems.co.uk](http://www.hillspeakersystems.co.uk) Hill Technical Support . Products returned without a Service Request Number will be refused.

2. Pack the product in its original shipping carton. Also include a note explaining exactly how to duplicate the problem, a copy of the sales receipt with price and date showing, and your return address and contact number. If we cannot duplicate the problem or establish the starting date of your Limited Warranty, we may, at our option, charge for service time.

3. Ship the product in its original shipping carton, freight prepaid to the authorized service centre. The address of your closest authorized service centre will be given to you by Technical Support.

**IMPORTANT:** Make sure that the Service Request Number is plainly written on the shipping carton.

E. The Company reserves the right to inspect any products that may be the subject of any warranty claims before repair or replacement is carried out. The Company may, at our option, require proof of the original date of purchase in the form of a dated copy of the original dealer's invoice or sales receipt. Final determination of warranty coverage lies solely with The Company.

F. Any products returned to one of The Company factory-authorized service centres and deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced within thirty days of receipt. The Company and its authorized service centres may use refurbished parts for repair or replacement of any product. Products returned to The Company that do not meet the terms of this Warranty will be not be repaired unless payment is received for labour, materials, return freight, and insurance. Products repaired under warranty will be returned freight prepaid by The Company to any location within the national boundaries of the Authorised Dealer.

G. The Company warrants all repairs performed for 90 days or for the remainder of the warranty period. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse, or to exterior appearance. This warranty is recognized only if the inspection seals and serial number on the unit have not been defaced or removed.

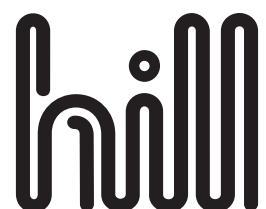
H. The Company assumes no responsibility for the quality or timeliness of repairs performed by an authorized service center.

I. This warranty is extended to the original purchaser and to anyone who may subsequently purchase this product within the applicable warranty period. A copy of the original sales receipt is required to obtain warranty repairs.

J. This is your sole warranty. The Company does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of The Company or to make any warranty for The Company

K. THE WARRANTY GIVEN ON THIS PAGE IS THE SOLE WARRANTY GIVEN BY THE COMPANY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE WARRANTY GIVEN ON THIS PAGE SHALL BE STRICTLY LIMITED IN DURATION TO FIVE YEARS FROM THE DATE OF ORIGINAL PURCHASE FROM AN AUTHORIZED DEALER. UPON EXPIRATION OF THE APPLICABLE WARRANTY PERIOD, THE COMPANY SHALL HAVE NO FURTHER WARRANTY OBLIGATION OF ANY KIND. THE COMPANY SHALL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES THAT MAY RESULT FROM ANY DEFECT IN THE COMPANY PRODUCT OR ANY WARRANTY CLAIM.

The Company; Rock-tech Projects LTD



# Attaching The Flying Kit

## ! WARNING !

Work can only be carried out by professionals and the manufacturer does not take any liability for non-manufacturer fitted flying hardware.

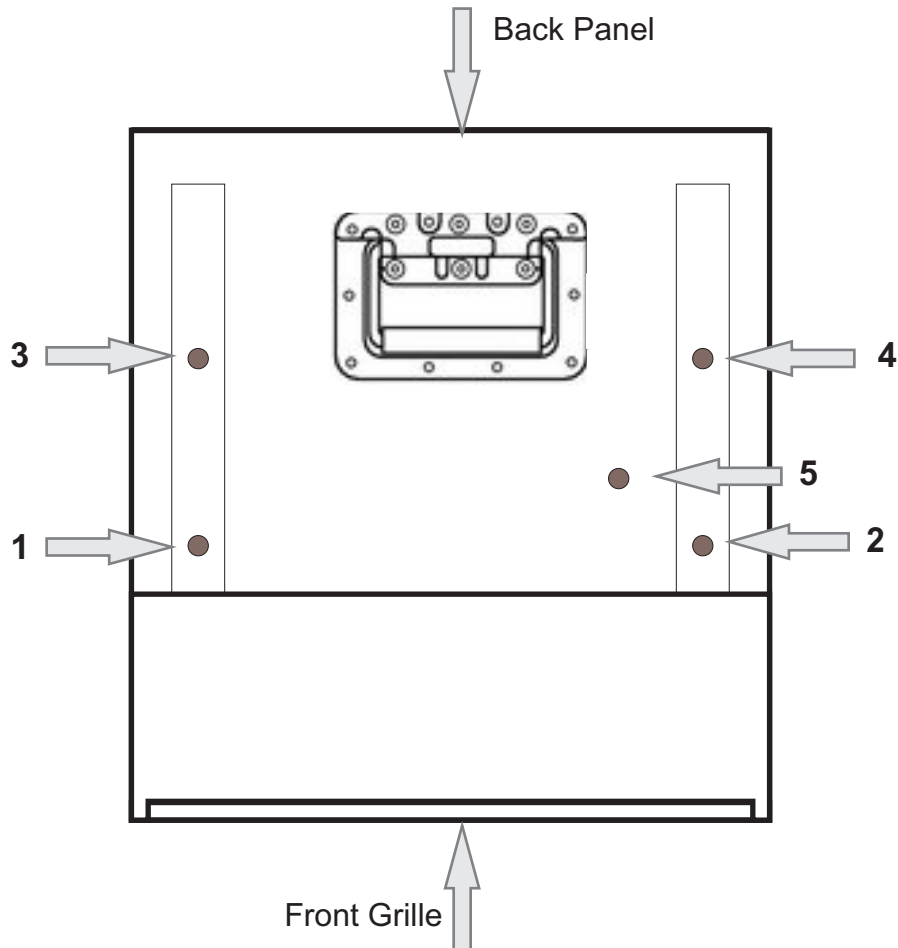


Fig 9. Where the flying frame is positioned

- Step 1. Remove machine screws 1 and 2
- Step 2. Place 150mm of cargo track into each slot.
- Step 3. Make sure that the cargo track lines up with the front grill side
- Step 4. Screw the Aero-track down with the machine screws that you removed from 1 and 2 into holes 1 and 2. These should be tightened to no less than 4NM of torque

*Warning: Do not remove bolt 5. Use only provided machine screws, incorrect lengths may damage the equipment.*

# Product Registration Form

## Your details

First name:..... Last name.....

Email address:.....

## Retail outlet details

Retail outlet name:.....

Retail outlet town/city:.....Date of purchase: \_\_\_ / \_\_\_ / \_\_\_

## Product Details

Product type:.....Product serial number.....

Signature\*:..... Date: \_\_\_ / \_\_\_ / \_\_\_

\*I declare that all the above information is right and truthful. I am aware that if this is not the case this may void any warranty and hinder any technical help.

Please send this form to:

Product Registration, Unit 2, Fryers Court, Murton, York YO19 5UY



[www.hillspeakersystems.com](http://www.hillspeakersystems.com)