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Cyclone 10

Dynamic Sound, Visionary Form

USER GUIDE V2.2

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Contents

1	Safety and Regulations	4
1.1	Important Safety Instructions	4
1.2	Limitations	4
1.3	EC Declaration of Conformity	4
1.4	UKCA Conformity	4
1.5	Warranty Statement	4
1.6	WEEE Directive	4
2	Unpacking and Checking	5
3	About	6
3.1	Welcome	6
3.2	Cyclone 10 Overview	6
3.3	Key Features	6
3.4	Cyclone 10 Specifications	7
3.5	Cyclone 10 Dimensions	8
4	Cable and Wiring	9
4.1	Electrical Safety	9
4.2	Cable Considerations for Fixed Installations	9
4.3	Phoenix Connector	9
4.4	Cyclone Glanded Connector Wiring	10
4.5	Cyclone 10 Wiring Diagram	11
4.6	Bias D1/Q1/Q2 Phoenix Wiring	12
4.7	Bias Q3/Q5 speakON™ wiring	12
5	Mounting	13
5.1	Installation Safety	13
5.2	Wall Mounting	14
5.3	Ceiling Mounting	16
5.4	Horn Rotation	18
5.5	Pole Mounting	20
6	Service	22
6.1	Return Authorisation	22
6.2	Shipping and Packing Considerations	22
7	Appendix	23

1 Safety and Regulations

1.1 Important safety instructions



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

Safety instructions - read this first

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat source such as radiators, heat registers, stoves, or other such apparatus that produce heat.
9. Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect power cords from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
11. Only use attachments and accessories specified by Void Acoustics.
12. Only use with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the 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. Since the mains power supply cord attachment plug is used to disconnect the device, the plug should always be easily accessible.
16. Void loudspeakers can produce sound levels capable of causing permanent hearing damage from prolonged exposure. The higher the sound level, the less exposure needed to cause such damage. Avoid prolonged exposure to the high sound levels from the loudspeaker.

1.2 Limitations

This guide is provided to help familiarise the user with the loudspeaker system and its accessories. It is not intended to provide comprehensive electrical, fire, mechanical and noise training and is not a substitute for industry-approved training. Nor does this guide absolve the user of their obligation to comply with all relevant safety legislation and codes of practice. While every care has been taken in creating this guide, safety is user-dependent and Void Acoustics Research Ltd cannot guarantee complete safety whenever the system is rigged and operated.

1.3 EC declaration of conformity

For EC Declaration of Conformity please go to:

www.voidacoustics.com/eu-declaration-loudspeakers

1.4 UKCA marking

For details of the UKCA marking go to:

www.voidacoustics.com/uk-declaration-loudspeakers

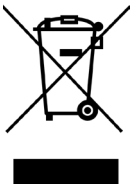
1.5 Warranty statement

For warranty statement go to:

https://voidacoustics.com/terms-conditions/

1.6 WEEE directive

If the time arises to throw away your product, please recycle all the components possible.



This symbol indicates that when the end-user wishes to discard this product, it must be sent to separate collection facilities for recovery and recycling. By separating this product from other household-type waste, the volume of waste sent to incinerators or land-fills will be reduced and natural resources will thus be conserved.

The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment. Void Acoustics Research Ltd complies with the Directive 2002/96/EC and 2003/108/EC of the European Parliament on waste electrical finance the cost of treatment and recovery of electronic equipment (WEEE) in order to reduce the amount of WEEE that is being disposed of in land-fill sites. All of our products are marked with the WEEE symbol; this indicates that this product must NOT be disposed of with other waste. Instead it is the user's responsibility to dispose of their waste electrical and electronic equipment by handing it over to an approved reprocessor, or by returning it to Void Acoustics Research Ltd for reprocessing. For more information about where you can send your waste equipment for recycling, please contact Void Acoustics Research Ltd or one of your local distributors.

2 Unpacking and Checking

All Void Acoustics products are carefully manufactured and thoroughly tested before being despatched. Your dealer will ensure that your Void products are in pristine condition before being forwarded to you but mistakes and accidents can happen.

Before signing for your delivery:

- Inspect your shipment for any signs of contamination, abuse or transit damage as soon as you receive it
- Check your Void Acoustics delivery fully against your order
- If your shipment is incomplete or any of its contents are found to be damaged; inform the shipping company and inform your dealer.

When you are removing your Cyclone Series loudspeaker from its original packaging:

- Cyclone Series loudspeakers come double boxed are stapled shut; take care when unboxing and removing the staples to avoid injury or damage to the loudspeaker
- If you need to place the loudspeaker on a flat surface ensure you use a lint free product to protect the finish
- When you have removed the Cyclone Series loudspeaker from the packaging inspect it to ensure there is no damage and keep all original packaging in case it needs to be returned for any reason.

See section 1.5 for warranty conditions and see section 6 if your product needs service.

3 About

3.1 Welcome

Many thanks for purchasing this Void Acoustics Cyclone Series loudspeaker. We truly appreciate your support. At Void, we design, manufacture and distribute advanced professional audio systems for the installed and live sound market sectors. Like all Void products, our highly skilled and experienced engineers have successfully combined pioneering technologies with groundbreaking design aesthetics, to bring you superior sound quality and visual innovation. In buying this product, you are now part of the Void family and we hope using it brings you years of satisfaction. This guide will help you both use this product safely and ensure it performs to its full capability.

3.2 Cyclone 10 overview

The Cyclone 10's beautifully sculpted fibreglass enclosure is paired with a smooth cellulose finish to create a weather-protected package with an IP-55 rating for years of great sound and trouble-free outdoor use, even in humid environments such as beach bars, resorts, cruise ships, hotels and public spaces. The T80XL bracket enables the Cyclone 10 to be installed quickly and securely with a wide range of adjustment.

3.3 Key features

- Passive 10" two-way surface mount loudspeaker
- Compact fibreglass enclosure
- Non-resonant structure
- Marine-grade stainless steel fittings
- UV-resilient paint
- Weather-protected with an IP-55 rating (BS EN 60529:1992 +A2:2013)

3 About

3.4 Cyclone 10 specifications

Frequency response	52 Hz - 22 kHz ± 3 dB
Efficiency[1]	97 dB 1W/1m
Nominal impedance	8 Ω
Power handling[2]	350 W AES
Maximum output[3]	123 dB cont, 126 dB peak
Driver configuration	1 x 10" LF, 1 x 1" HF compression driver
Dispersion	90°H x 60°V
Connectors	Phoenix connectors with link out
Height	493 mm (19.4")
Width	320 mm (12.6")
Depth	230 mm (9.1")
Weight	14.5 kg (32 lbs)
Enclosure	Fibreglass
IP Rating	IP-55 (BS EN 60529:1992 +A2:2013)
Rigging	Optional Easy Hang XL wall bracket
Finish	Smooth cellulose

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

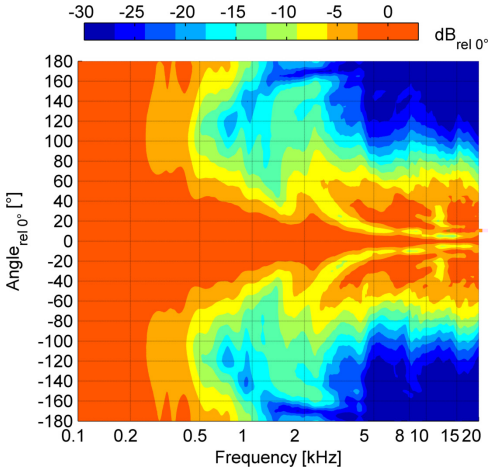


Figure 3.1: Horizontal directivity isobars

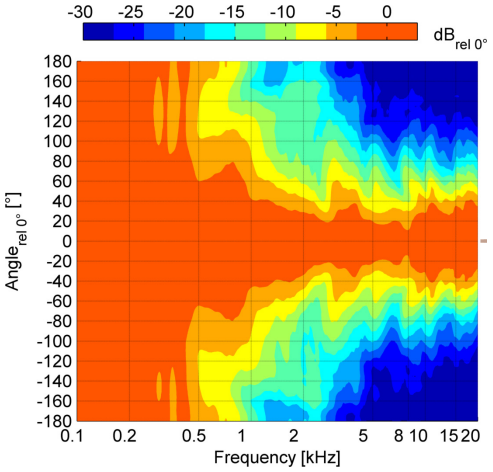


Figure 3.2: Vertical directivity isobars

3 About

3.5 Cyclone 10 dimensions

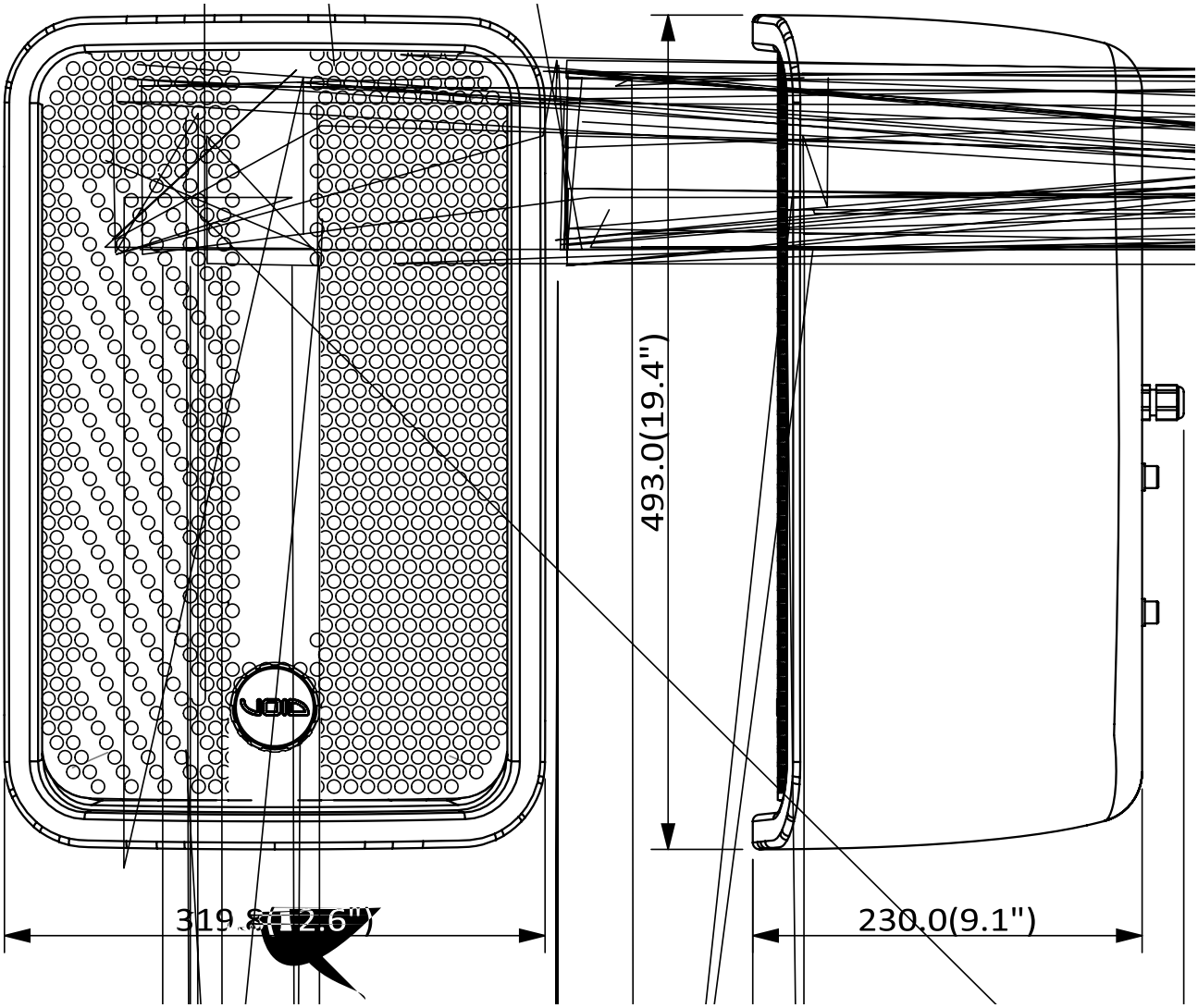


Figure 3.3: Dimensions

4 Cable and Wiring

4.1 Electrical safety



To avoid electrical hazards please note the following:

- Do not access the inside of any electrical equipment. Refer servicing to Void-approved service agents.

4.2 Cable considerations for fixed installations

We recommend specifying installation-grade Low Smoke Zero Halogen (LSZH) cables for permanent installations. The cables should use Oxygen Free Copper (OFC) of grade C11000 or above. Cables for permanent installations should be compliant with the following standards:

- IEC 60332.1 Fire retardancy of a single cable
- IEC 60332.3C Fire retardancy of bunched cables
- IEC 60754.1 Amount of Halogen Gas Emissions
- IEC 60754.2 Degree of acidity of released gases
- IEC 61034.2 Measurement of smoke density.

We suggest using the following maximum copper cable lengths to keep level losses below 0.6 dB.

Metric mm^2	Imperial AWG	16 Ω load	8 Ω load	4 Ω load	2 Ω load
2.50 mm^2	13 AWG	72 m	36 m	18 m	9 m
4.00 mm^2	11 AWG	120 m	60 m	30 m	15 m

4.3 Phoenix connector

Figure 4.1 shows the rear panel of a Cyclone Series loudspeaker with the polarity of the Phoenix connector labelled. When viewed from the rear the connectors are negative, positive, negative, positive, from left to right.

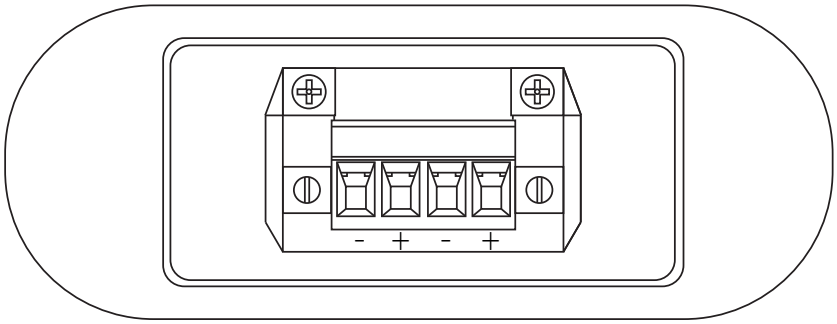
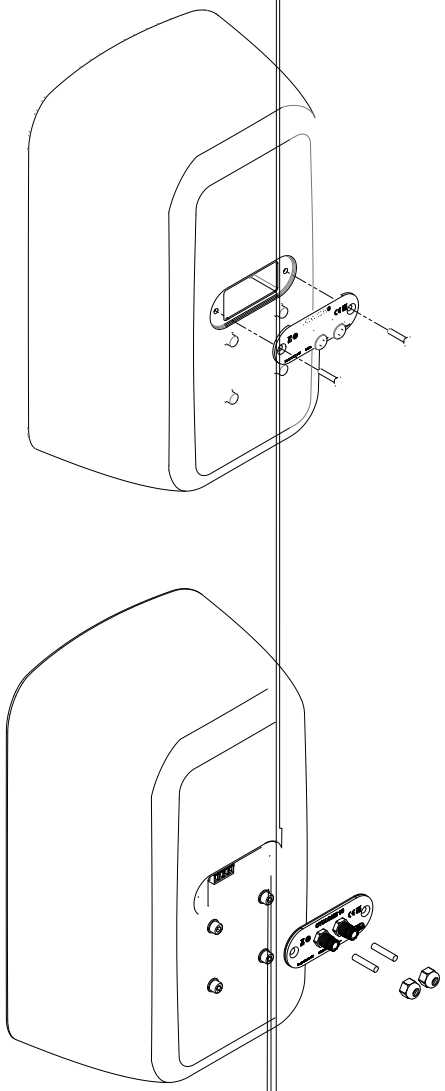


Figure 4.1: Phoenix connector diagram

4 Cable and Wiring

4.4 Cyclone glanded connector wiring



4.6 Bias D1/Q1/Q2 Phoenix wiring

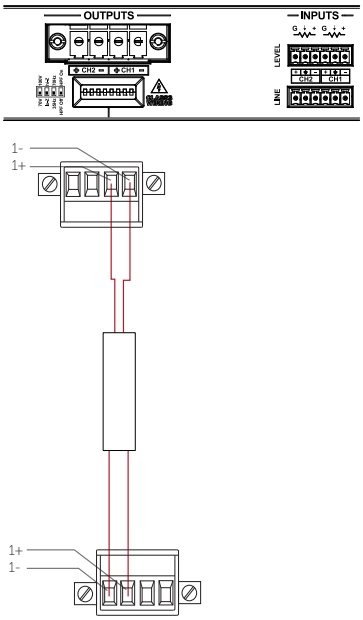


Figure 4.8: Bias D1 output connection

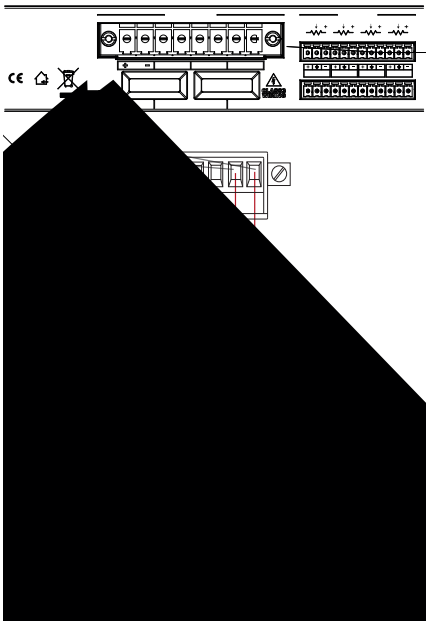


Figure 4.9: Bias Q1/Q2 output connection

Bias D1/Q1/Q2	Out 1
Output	LF (1 x 10") and HF (1 x 1")
Max parallel units	4 (2 Ω load to amplifier)

4.7 Bias Q3/Q5 speakON™ wiring

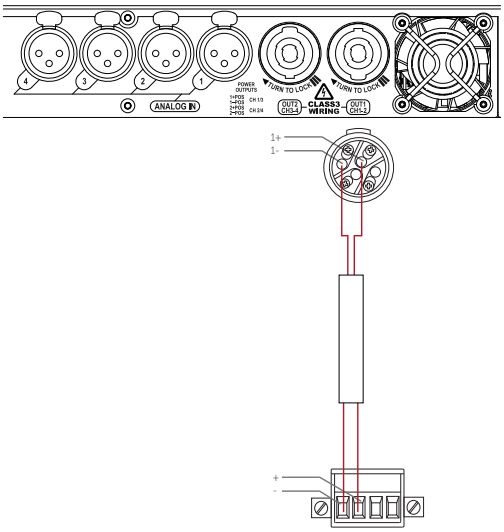


Figure 4.11: Bias Q5

Bias Q3/Q5	Out 1
Output	LF (1 x 10") and HF (1 x 1")
Max quantity per channel	4 (2 Ω load to amplifier)

5 Mounting

5.1 Installation safety

To avoid mechanical hazards, please note the following:



- Safety regulations vary in different regions. Full compliance with those regulations must be your priority
- Installations must only be undertaken by fully qualified and experienced engineers/technicians who understand local regulations
- This may include consulting a structural engineer before installation of wall brackets
- Remember that all personnel have a duty of care to themselves, to their assistants, to the venue staff and to the public
- Before lifting any part of the system above head height, check the whole rig for loose tools or other items that may fall and cause injury
- Do not use a telephone (even if hands-free) whilst installing. Always concentrate fully on the installation operation
- Do not install equipment that is worn, damaged, corroded, mishandled or over-stressed in any way
- Use only Void-approved mounting equipment and accessories
- Secondary safeties should be provided in all instances where cabinets are flying or fixing overhead and should conform to local regulations

5.2 Wall Mounting

Parts required:

T80XL - Wall Bracket	White - IT1115
	Black - IT1114

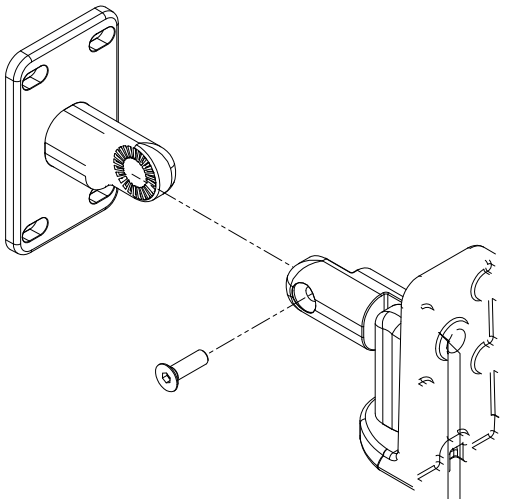


Figure 5.1: T80 XL

Step 1:
Remove all four M8 bolts from the rear of the loudspeaker.

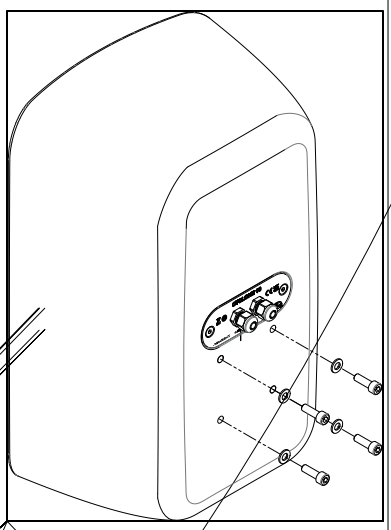


Figure 5.2: Bolt removal

Step 2:
Remove the front of the bracket from the main bracket assembly. Attach the rear of the bracket assembly to the wall making sure all 4 bolts are fitted.

Take care when mounting the bracket to the wall, making sure to use the correct fixing and that the wall can take the load, for example do not attach the bracket to a stud wall.

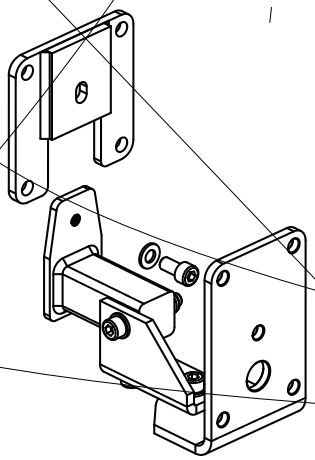


Figure 5.3: Mounting plate

5.2 Wall Mounting

Step 3:
Attach the front of the bracket assembly to the rear of the loudspeaker using all four M8 bolts.

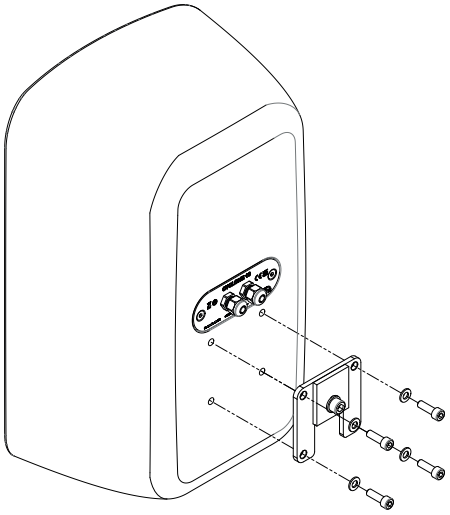


Figure 5.4: Attaching bracket to loudspeaker

Step 4:
Lower the speaker assembly on to the rear of the bracket assembly and fix the bolt into the rear of assembly.

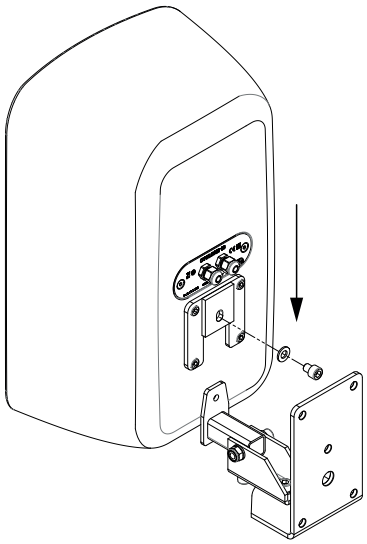


Figure 5.5: Attaching loudspeaker to bracket

Step 5:
Adjust the bracket in the horizontal axis by loosening the bolt at the rear of the assembly (figure 5.6a) and in the vertical axis by adjusting the bolt on the base of the assembly (figure 5.6b).

Max horizontal rotation: ±70°
Max vertical rotation: +28°, -0°

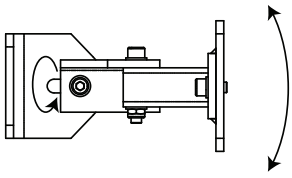


Figure 5.6a: Bracket adjustment

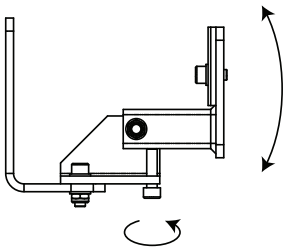


Figure 5.6b: Bracket adjustment

5.3 Ceiling Mounting

Parts required:

T80 - Ceiling Bracket	White - IT1106
	Black - IT1105

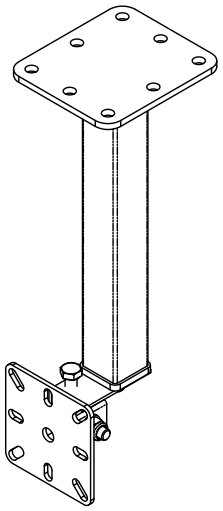


Figure 5.7: T80 - Ceiling Bracket (350mm)

Step 1:
Remove all four M8 bolts from the rear of the loudspeaker.

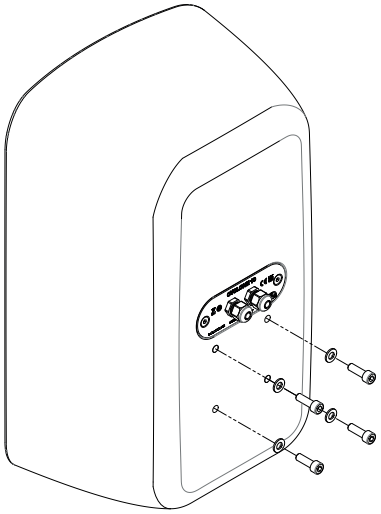


Figure 5.8: Cyclone bolt removal

Step 2:
Remove the M10 nut and washer from the base of the T80 ceiling bracket and remove the connector plate. At this stage fix the ceiling bracket in its operational location

Take care when mounting the bracket to the ceiling, making sure to use the correct fixing and that the ceiling can take the load.

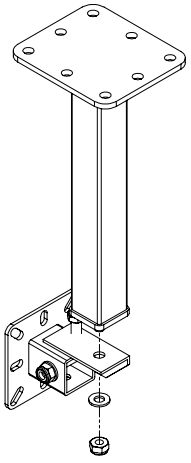


Figure 5.9: Deconstruction the bracket

5.3 Ceiling Mounting

Step 3:
Remove all four M8 bolts and washers from the rear of the cabinet. Fix the connector plate to the cabinet with all four M8 bolts.

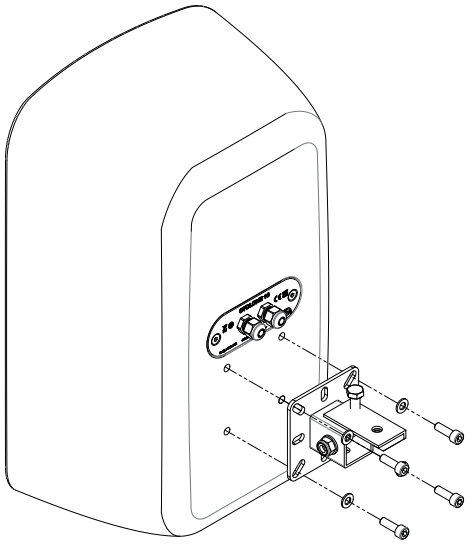


Figure 5.10: Plate attachment

Step 4:
Fix the connector plate to the bracket using the M10 nut and washer.

Max horizontal rotation: 360°
Max vertical rotation: ±12°

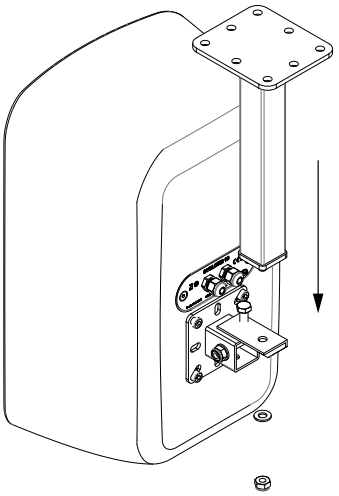
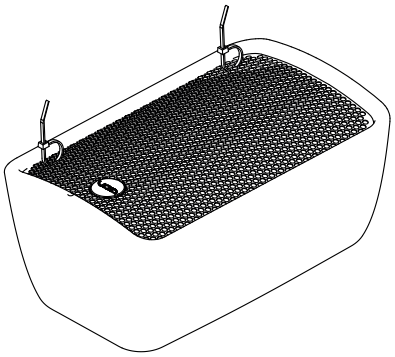
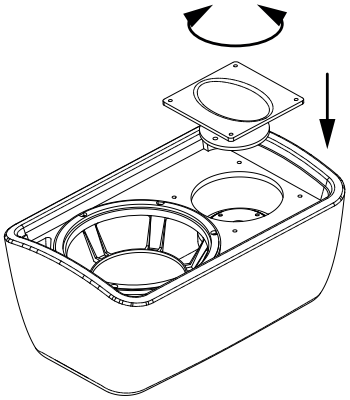
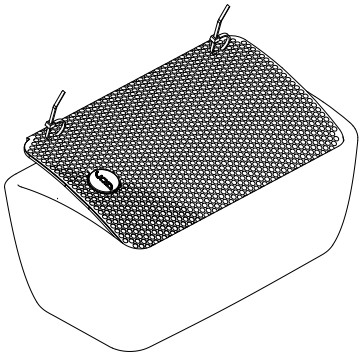


Figure 5.11: Bracket fixing

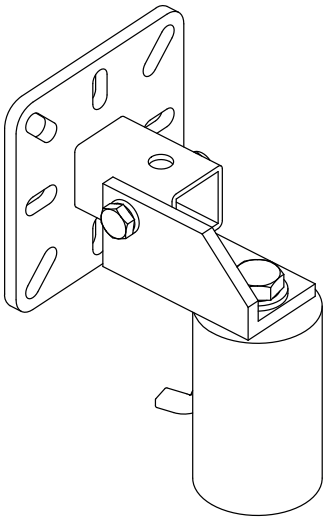
5.4 Horn Rotation

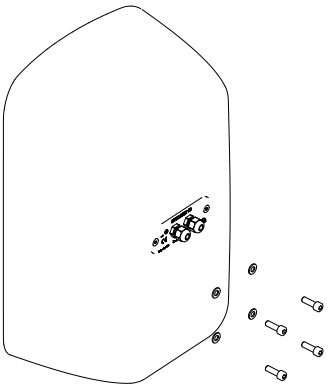






5.5 Pole Mounting





6 Service

Void Cyclone Series loudspeakers should only be serviced by a fully-trained technician.



No user serviceable parts inside. Refer servicing to your dealer.

6.1 Return authorisation

Before returning your faulty product for repair, please remember to get an R.A.N. (Return Authorisation Number) from the Void dealer who supplied the system to you. Your dealer will handle the necessary paperwork and repair. Failure to go through this return authorisation procedure could delay the repair of your product.

Note that your dealer will need to see a copy of your sales receipt as proof of purchase so please have this to hand when applying for return authorisation.

6.2 Shipping and packing considerations

- When sending a Cyclone Series loudspeaker to an authorised service centre, please write a detailed description of the fault and list any other equipment used in conjunction with the faulty product.
- Accessories will not be required. Do not send the instruction manual, cables or any other hardware unless your dealer asks you to.
- Pack your unit in the original factory packaging if possible. Include a note of the fault description with the product. Do not send it separately.
- Ensure safe transportation of your unit to the authorised service centre.

7 Appendix

Application Note: Loudspeakers in Corrosive Environments

Void Acoustics' weather protected and IP rated products are suitable for outdoor use, however installations in highly corrosive environments, such as high salinity or in the presence of corrosive chemicals such as chlorine, require additional care and maintenance. The following guide will help to prevent corrosion and prolong both the product aesthetics and sonic performance. It is recommended that this process is implemented weekly.

Step 1: Remove the grill as applicable and wash with deionised water, ensuring all build-up of contamination is removed completely from the grille and the foam (where fitted). Allow the foam to dry completely before reinstalling, protecting the loudspeaker accordingly in the interim.

Step 2: Using a clean microfibre cloth and deionised water, use circular motions working from the top of the product down to remove contamination. Dry the product with a clean, dry microfibre cloth.

Step 3: Use a soft bristled brush and deionised water to clean the bracketry, ensuring all contamination is removed completely.

7 Appendix

Cyclone 10 architectural specification

The loudspeaker shall be a passive two-way system consisting of one high power 10" (250 mm), direct radiating, reflex loaded low frequency (LF) transducer and one 1" (25 mm) diameter composite plastic exit high frequency (HF) compression driver mounted on a user rotatable constant directivity horn in a moulded fibreglass trapezoidal enclosure.

The low frequency transducer shall be constructed on a cast aluminium frame, with a treated paper cone, 50.8 mm (2") voice coil, wound with copper wire on a high quality voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project its sound through a high precision constant directivity waveguide with a 152.4 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 52 Hz to 22 kHz (±3 dB), with an average 90° directivity pattern in the horizontal axis and 60° in the vertical one (-6 dB down from on-axis level) from 1 kHz to 15 kHz; and maximum SPL shall be 126 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 350 W AES at a rated impedance of 8 Ω. The wiring connection shall be via a single removable lockable wiring connector with four screw-down terminals (one pair for input and one pair for loop-out to another loudspeaker) to provide secure wiring and allow for pre-wiring of the connector before the installation. This connector should then screw lock to the enclosure to ensure secure attachment.

The enclosure, of any RAL colour, shall be of a moulded fibreglass reinforced plastic construction with a smooth cellulose finish and shall include integral threaded inserts for the fitment of wall and ceiling mounting hardware. The external dimensions of the cabinet are (H) 493 mm x (W) 320 mm x (D) 230 mm (19.4" x 12.6" x 9.1"). Weight shall be 14.5 kg (32 lbs).

The loudspeaker system shall be a Void Acoustics Cyclone 10.

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