



DIY

Installation guide



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DIY Installation of Infinity Mix

Components

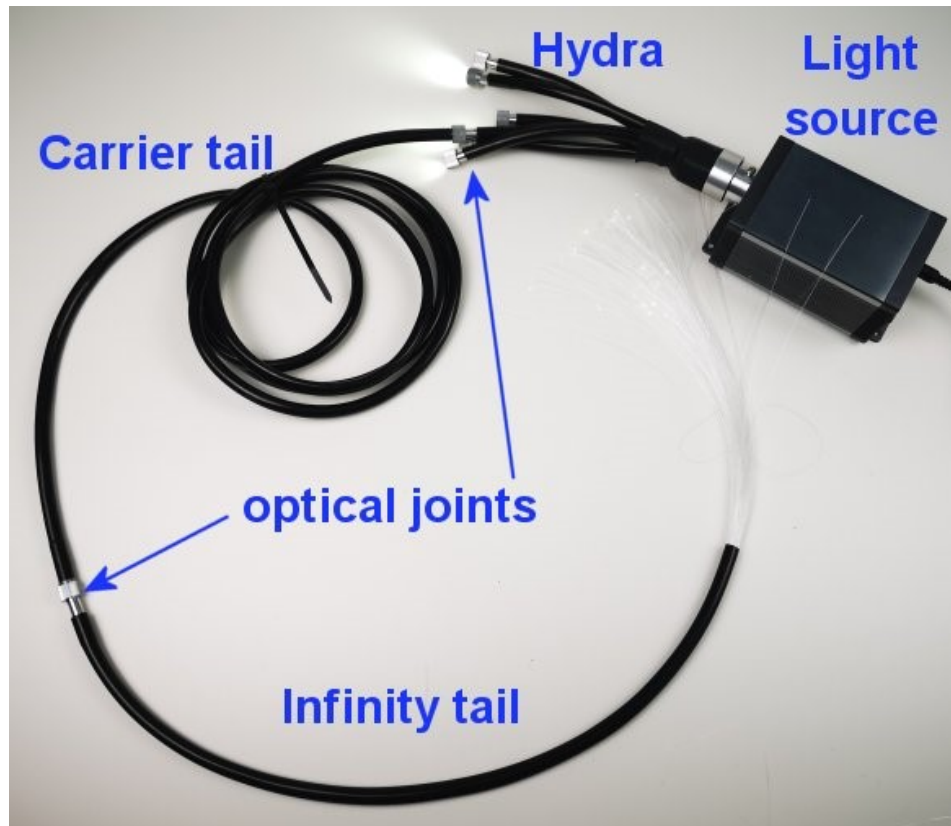
Lightsource	The unit that provides the light and effects for your ceiling.
Hydra-6	6 mini tails ending in small metal ferrules which are brought together in a large metal ferrule which plugs into the light source
Carrier tails	Sheathed fibre which carries light from the light source to the infinity tail. Lengths will be as required for your project. These tails will have a small metal ferrule at each end.
Infinity Tails	Sheathed bundles of 100 fibres of mixed diameter, with the following mix: 1 x 1.5mm 5 x 1mm 14 x 0.75mm 80 x 0.5mm There will be a small metal connector with a loose nut at one end only. These tails provide the mix of star points for your installation

Panel material selection

If the fibres are to be fitted into separate panels for fitting rather than being installed directly into an existing ceiling, then a few points need to be considered depending on the material

- Panels without framing – if the panel is to be fitted with others and will not have an attached frame, then we recommend a minimum thickness of 10mm to keep the panel rigid.
- Panels with framing – if the panel is to be fitted with a frame on the rear, then we recommend a minimum thickness of 3-5mm depending on the rigidity of the panel.
- Plasterboard – Tapered Edge (TE) boards for dry lining are recommended as they require only the joints and screw heads to be filled whereas standard Square Edge (SE) boards would require a full skim of plaster.

Any panels that are going to have additional components screwed into them (e.g. magnets, tethers etc) then the panel must be thick to hold suitable length screws, and are not less than 10mm thick.



Lightsource

Ensure the lightsource is positioned on a flat surface e.g. on a plywood base rather than balanced on a joist. If the unit is to be wall mounted, the rear vent must not be obscured. There must always be space for air flow around the unit.

The manual for the lightsource is included in the box.

If a hard wire kit has been requested, this should be installed by a qualified electrician.

Hydra-6 and Carrier tails

The Hydra will split the light emitted from the lightsource into 6 separate tails. You may not need all 6 tails; however, this system allows for flexibility.

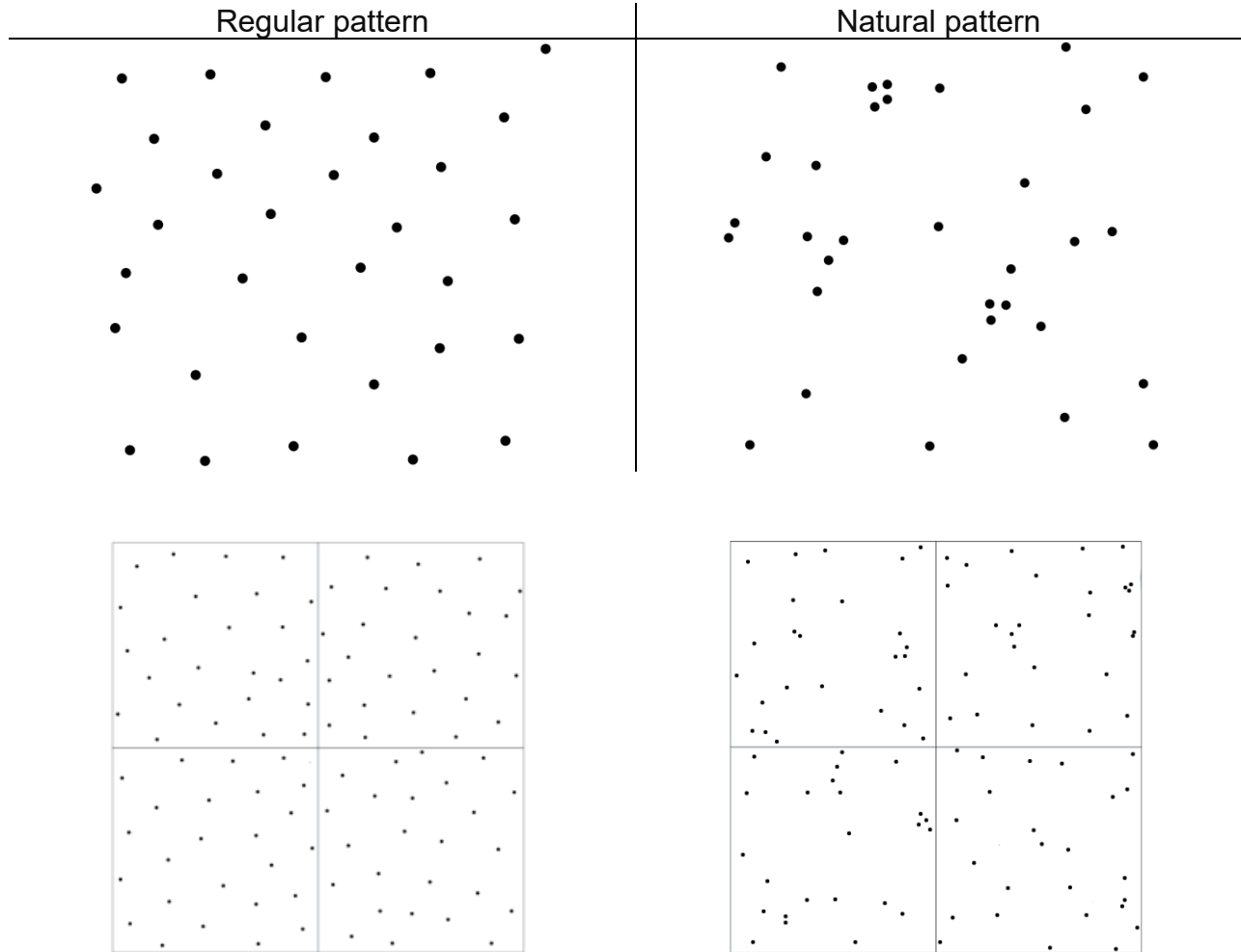
Once the light source has been situated, plug in the Hydra and tighten the small screw on the optical port of the lightsource.

The carrier tails transfer the light from the Hydra to the Infinity tail. All components fit together using a screw joint.

Installing fibre into a panel

Star field layout

The decision needs to be made as to whether a natural star pattern or a more regular pattern is required.



Each one of the quarters in this picture has 25 star points evenly spaced. It may help to lay out the star field with a pale coloured pen as it can be hard to see drill holes if a dark pen has been used.

A natural star layout may seem daunting however it can be achieved very easily. The main thing to remember is to include pairs and clusters of star points. Having bare areas is natural.

Each quarter still has 25 stars, but with larger spaces between, and sometimes with stars in small clusters

*******IT IS RECOMMENDED THAT A SMALL SAMPLE PANEL IS MADE UP TO TEST ADHESIVE, COVERING, DRILLING ETC*******

Preparing the panel

Depending on the material of the panel and the required finish, varying degrees of preparation will be needed.

- ACP (or similar non-porous material) – generally no additional preparation is required, but the rear will need to be keyed for adhesion.
- MDF (or similar porous material) – the rear of the panel should be brushed, wiped with a lightly damp cloth and keyed with a spray adhesive. If a painted finish is required, then the face should be primed and at least two coats of the paint applied.
- Plasterboard - the rear of the panel should be brushed, wiped with a lightly damp cloth and keyed with a spray adhesive.

If a panel is being fabric covered, then ensure the surface is keyed by lightly sanding it, then ensuring it is dust free as above, before fitting the fabric.

Drilling the panel

The composition and any coverings on the panel determine how it should be drilled. If drilling the material could result in splinters or bulging on the reverse, e.g. plywood, then it should be drilled from the face. Drilling from the front will ensure any damage or splintering is restricted to the back of the panel where it will not be seen. If the material does not splinter, e.g., MDF then it can be drilled from the front or the rear.

Any panel that had a covering on the face should be carefully drilled from the front to avoid lifting the covering as the drill bit exits the panel. This also ensures that the drill bit cuts cleanly through the covering rather than tearing it. When the panel is drilled from the front, particular care should be taken to ensure that the chuck does not touch the surface as this can cause irreversible damage to the panel.

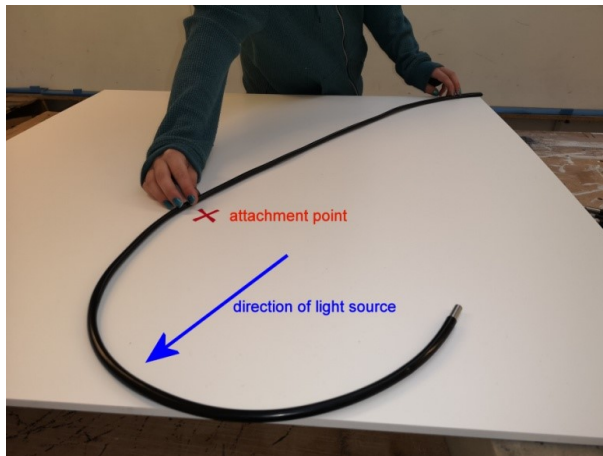
When selecting the correct drill bit size, it should be kept as close as possible to the fibre size. This is more important where the finished colour of the panel will be pale or white. For example, for 0.5mm, 0.75mm and 1mm fibre use a 1mm drill bit and for 1.5mm fibre use a 1.5mm drill bit. Drill bits should always be sharp, and the holes drilled at high speed and the drill held upright to ensure a clean cut.

It may be beneficial to drill and mark the location of the larger hole on the reverse of the panel before drilling the smaller holes. Marking over the smaller holes (we use broad nib luminous marker) may also help to locate the holes when fitting the fibres. Also mark where the tail will be attached and avoid drilling within 30mm of this location.

Always drill fewer holes than are needed e.g., drill 95 holes for 1 tail of 100 fibres. This allows for any mistakes or snapped fibres. Left over fibres can then be fitted afterwards.

If the material leaves a rough edge when the drill bit exits the panel, such as with ACP, then the back of the panel should be lightly sanded down to remove the rough edges, then brushed and wiped down to remove any dust.

Tail and tail position



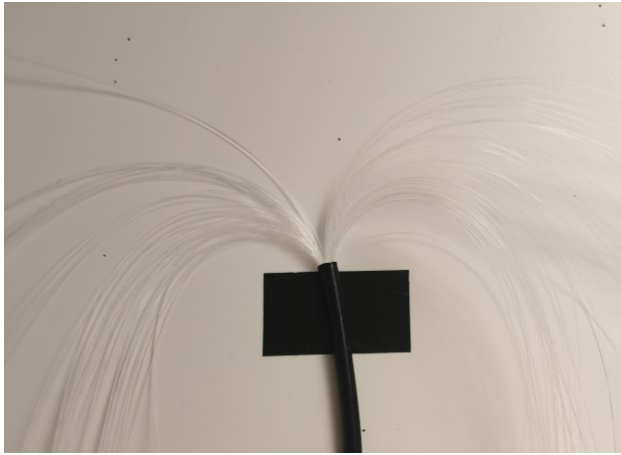
The tail may be placed anywhere on your panel, ideally the ferrule should point towards the light source and not be less than 50mm from the edge. Ensure that the tail will reach to the around 50mm beyond the furthest edge of the panel.



It will be easier to strip off sheathing before the tail is attached to the panel. Measure the distance from the attachment point to the furthest point and strip this length of sheathing from the tail. This can be done by gently scoring with a sharp Stanley or craft type knife around the sheathing and then bending the tail. This should open the score line and the sheathing will then pull off. Take care to not cut through the sheathing and score the fibres.

The tail can be attached to the panels using a sticky pad and cable tie around the sheathing just above the fibres, or by strong tape such as duct tape. Once this is done, the panel is ready for fitting the fibres.

Inserting fibres



Open out the bundle and insert the fibres into the drilled holes. Fan the fibres out to avoid them getting too tangled.

It is usually easier to fit the fibres into the drill holes in the direction of the arrows in the picture. Remember that the 1.5mm fibre will only fit through the hole which was specially marked. Intersperse the thinner fibres with thicker fibres for a more natural effect.

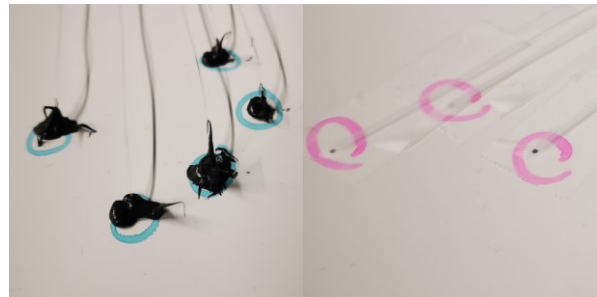
Care must be taken when fitting as the fibres may snap if they are pulled too hard and could lose light or snap if bent more than 90 degrees.

When fitting into plasterboard, use only the thinnest fibres in holes in the tapered edge so that they can flex when the filler is applied.

Fixing fibres

After the fibres are fitted, they need to be secured. This can either be with a small amount of silicone or adhesive tape.

In either case, it is important that the fibre is secured where it enters the panel.



A vinyl backing or similar is necessary when using tape. When used on a surface that required a spray key, then it will be necessary to repeat the process before fitting the backing.

Clipping fibres

The projecting fibres on the face can be trimmed back to the desired length once any adhesive has cured, and ideally once the panel has been fitted. The length of the cut fibres depends on the final finish of the panel:

- Plasterboard – cut fibres to approximately 50mm long until ready for decorating, then follow as below for Painted.
- Painted – cut fibres to approximately 5mm long, then finish decorating using a roller. Fibres can then be cut to 2mm long
- Fabric finish - cut fibres to approximately 2mm long from fabric surface.
- Smooth, unpainted finish - cut fibres to approximately 2mm long from panel surface.

Care must be taken not to cut the fibres too short or flush with the surface of the panel. When in doubt always leave long and retrim as necessary rather than cutting too short.

The fibres can be cut using scissors or nail clippers. Care should be taken when handling panels with cut fibres as the cut ends can be sharp. Once the panel is finished, the face should be lightly brushed with a soft handbrush to remove any loose fibre clippings. Fabric covered panels should also be brushed again after installation to remove any handling marks.