

Wire type fall prevention system Interior Anchor



**ULTIMA**



Japan is an earthquake-prone country. The Great Hanshin-Awaji Earthquake, the Niigata-Chuetsu Earthquake, the Great East Japan Earthquake, and the Kumamoto Earthquake.

We see many buildings and ordinary houses collapsed.

Looking back on these lessons learned, we are reminded of the horror of secondary disasters caused by falling furniture and the importance of taking measures to prevent furniture from toppling over.

According to the Fire and Disaster Management Agency, 30-50% of the injuries caused by earthquakes in recent years were caused by falling furniture.

This means that nearly half of the people who were injured in earthquakes could have been spared if they had taken measures to prevent furniture from toppling over.

Why is it that preventive measures are not being taken when they should be taken immediately and thoroughly?

One reason is insufficient knowledge and information.



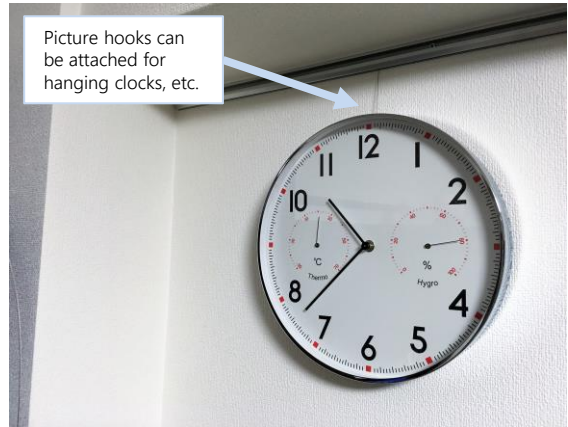
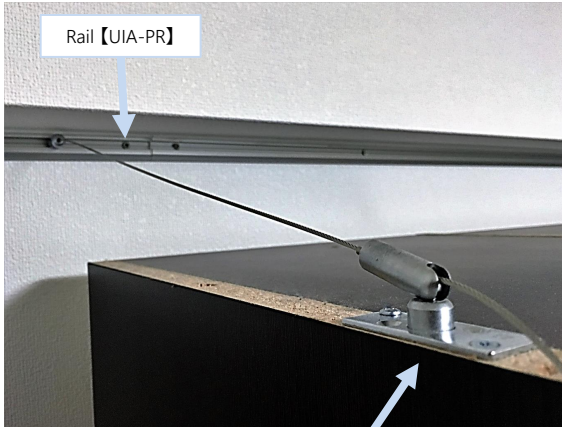
## Interior Anchor



- The industry's first combined type of **furniture fall prevention** and **picture rail**
- This is an unprecedented furniture fall prevention rail system for homes and offices that places the highest priority on interior design that blends in with any space, and is thoroughly focused on performance, design, and functionality.
- It can be used as a picture rail even if it is not used as a furniture fall prevention system.
- The picture rail is attached to the wall where the furniture is to be fixed, and the furniture is fixed with wires, so there is no need to worry about the position of the furniture and the wall base.
- The length of the wire can be adjusted to accommodate the depth of the furniture, and the furniture can be moved to the left or right on the rail.

Wire	Φ1.5
Rail color	Silver or bronze
Allowable load value	50 kg max * The value of the rail on the wall side. * Allowable load values are based on a safety factor of approximately 1/3 of the maximum static load value.
Main applications	Auxiliary support material to prevent general household furniture, office fixtures, office automation equipment, etc. from falling, dropping, or running out of control.
Main customers	Companies, universities, banks, public facilities, general households, and many others

# Features

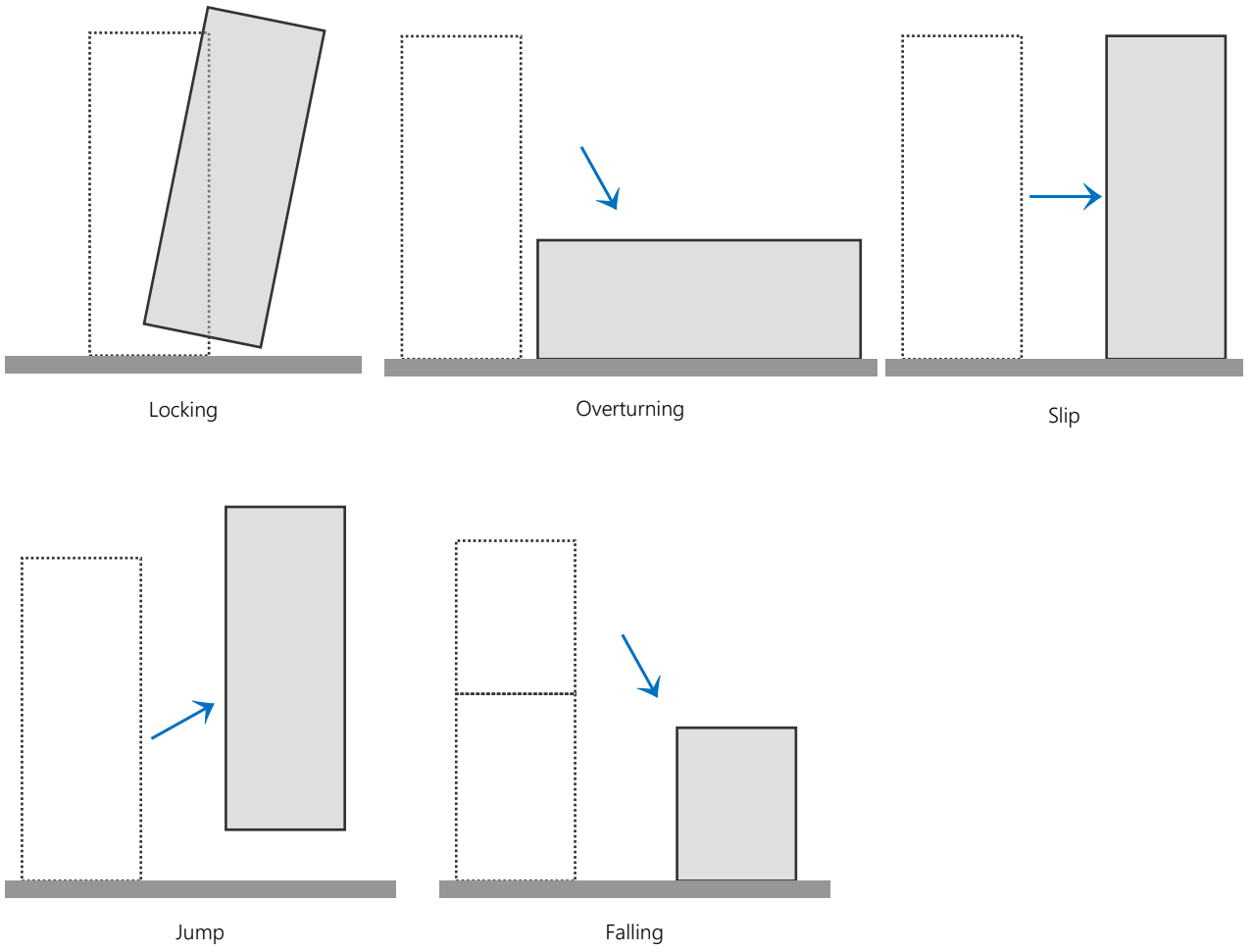


Please select stoppers and fittings according to the furniture, fixtures, and OA equipment to be fixed.

- Attachments on the rail slide freely to the left and right for easy movement adjustment.
- Depth adjustment of furniture can be easily made by adjusting the length of the wire.
- No positioning is required during installation, and layout changes can be easily made.
- Can be fixed to all types of walls, including concrete and wood construction.
- The entire wall is designed to support large shakes, thus maintaining a high level of strength.
- Furniture can be totally secured with anti-tip rails and furniture stoppers attached to the wall.
- The rail can also be used as a picture rail for hanging paintings, clocks, etc.
- The compact design with no waste blends in with the living room without any sense of incongruity.
- Depth adjustment of furniture is easy with the wire length adjustment function (with adjustment grips). Furniture can be moved freely and easily by simply sliding the fixing bracket on the rail to the left or right.
- The one-touch locking and adjusting function allows for easy mounting and dismounting, and can be freely adapted to changes in furniture layout.
- The rail is available in two colors, silver and bronze. You can choose the color that best matches the atmosphere of your living room. The "Bronze" rail is available in two colors: Silver and Bronze.
- Compared to L-shaped brackets, where screws are limited to certain positions, rails secured with multiple screws can be used to fix furniture in any position.

# Interior Anchor

Interior Anchors reduce the behavior of the furniture seen below



# Safety load setting

The most important factor in preventing furniture from toppling over is whether or not the furniture really will not topple over in the event of a major earthquake.

In an earthquake resistance test in which various furniture fall prevention goods were tested, Interior Anchor has obtained stable results even in an earthquake of intensity 7, as long as the metal fittings are firmly fixed.

The biggest reason is our unique grip.

Instead of a bearing type, which fixes the wire at a point, it is a shoe type, which fixes the wire at a surface, so there is less burden on the wire and the original strength of the wire can be maintained.

In other words, it is a wire type furniture fall prevention system that is safer and more secure to use.

Product name	Safe load (kg)	Maximum load (kg)
Furniture Stoppers (UIA-SA, UIA-SB, UIA-SC)	50	160
Picture rail hooks (UIA-1540F)	7	20

\* As a result of our testing, the safety factor is set at 1/3 or more of the maximum load value.

\* This strength is based on the assumption that the rail is firmly fixed to the base material with screws, etc. that match the material.

\* The maximum load is the strength up to the deformation of the rail.

## Attention

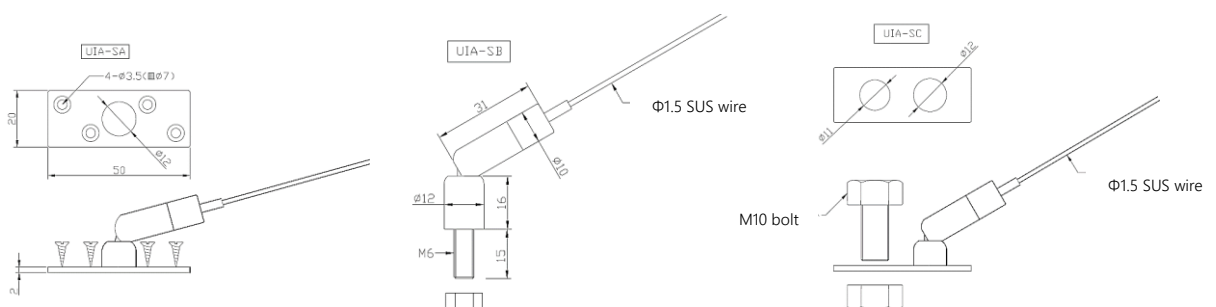
- The allowable load is 490 N (within 50 kg). This is about 1/3 of the maximum holding force value of the rail.
- The rails should be mounted securely to withstand the allowable load.
- When mounting the rail, check the location of the substrate and be sure to mount the rail in a location where the screws are effective.
- The effectiveness of the screws will affect the safety strength of the rail. If the rail is installed incorrectly, it may not be strong enough.
- Special metal fittings may be required depending on the material of the mounting location. Please consult a specialist for installation.
- Please use the wire with the end of the wire fully protruding from the grip. If the wire is too short to exit the grip, it may not be strong enough.
- After installation, check that the grips are in the locked position.
- The purpose of this product is to minimize furniture sway and prevent furniture from tipping over.
- Do not use any other means on the rail other than the dedicated furniture stopper and picture rail hooks.
- Do not apply paint or oil to the grips and wires.
- Standard dimension of wire is L=1000. Please consult us for other dimensions.
- Select the dedicated furniture stopper according to the material and shape of the fixture or furniture to be installed.
- Screws and nuts required for installation are not included.

# Product Specifications (stopper)



Methods	4 screw holes with pedestal bracket with wire length adjustment * <u>Recommended screws</u> (wood screws 3.1 x 13L) * <u>Screws are not included.</u>	M6 bolt fittings with wire length adjustment function	1 hole for M10 bolt with pedestal bracket with wire length adjustment function * <u>M10 bolt not included</u>
Material	brass, steel, stainless steel (SUS304)		
Finishing	Nickel matte plating		
Wire	L=1,000 × φ1.5mm (7×7)		
Note	Wooden furniture and cabinets	Medium and lightweight cabinets	Heavy cabinetry

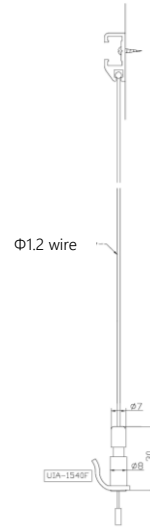
# Product Drawing





# Product Specifications (wire : $\phi$ 1.2、 allowable load: 68N (within 10kg)

1540-F Tip  $\phi$ 3.0 terminal type (coated wire)



Note	Only for our rail UIA-PR
Wire	$\phi$ 1.2mm SUS304 (7×7)
Wire length	L=1,000mm、1,500mm
Material	Body: brass Hook: brass, steel
Finishing	Anodized aluminum

\* Use within the working load.

\* Do not use a wire that is broken or damaged.

\* Make sure that the metal fittings are locked before hanging a frame or other hanging object.

\* Please make sure that the level is in a state where the hanging object is supported and no load is applied to it.

\* Avoid using the product outdoors, in high temperature, high humidity, shock, or in a state of constant vibration.

\* Do not use any wire other than the wire provided with the set.

\* Do not apply paint to hangers, wires, etc.

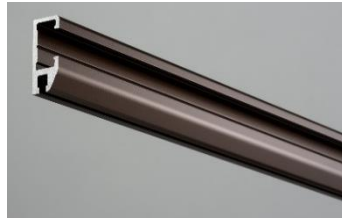
\* Not suitable for any other purpose other than general use of hangers.

\* L=1,000mm and 1,500mm are standard wire lengths, but other lengths are also available by special order.

\* For improvement, the shape and specifications are subject to change without notice.

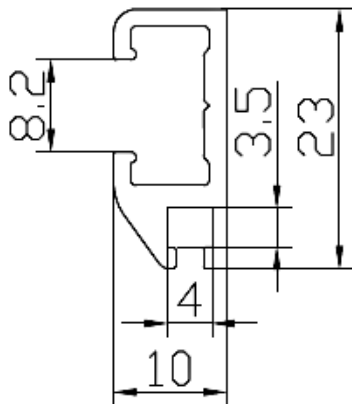
## Product Specifications (rail)

rail UIA-PR S	rail UIA-PR B	End caps (both ends)
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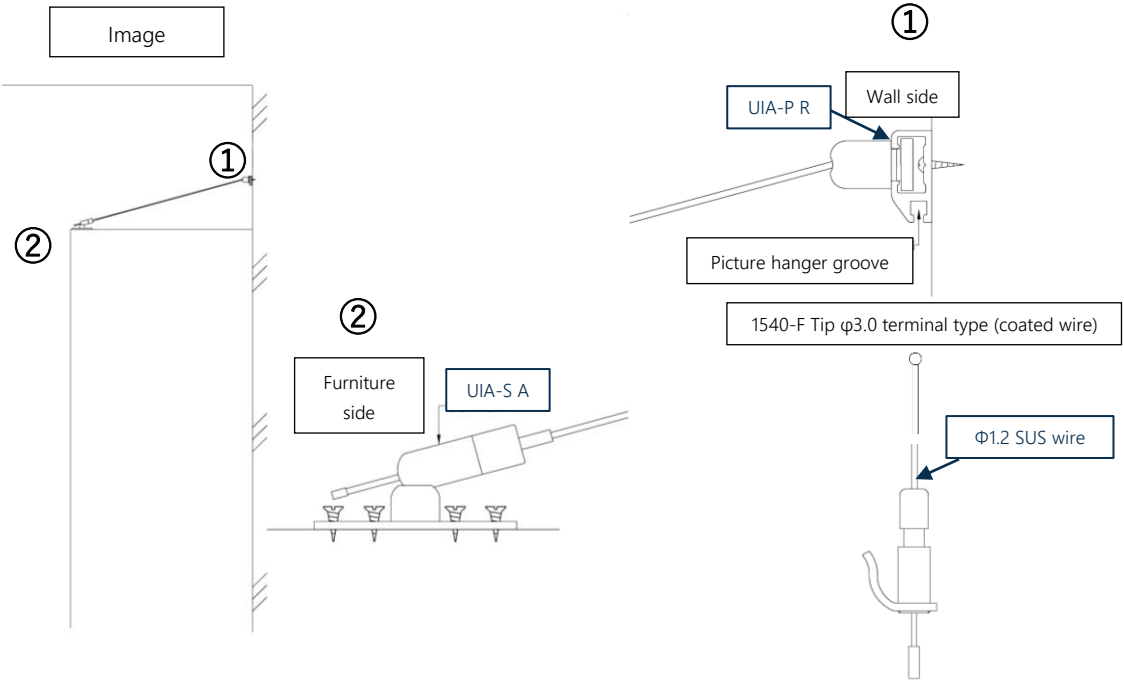


Color	Silver	Bronze	Black
Material	Aluminum extrusion molding		natural rubber
Size	L=900mm×2sets × D10mm × H23mm		-

## Product Drawing



# Detail Drawing



- \* Screws and nuts required for installation are sold separately.
- \* The stopper comes with an attachment to connect to the rail and a wire with length adjustment function.
- \* Please select a stopper according to the installation location.

## Important : About fixing screws to the wall

Screws for fixing to the wall are not included because the type of screw used depends on the material and structure of the mounting surface.

In order to select the appropriate screws for the material of the wall, we will introduce how to select screws for each material.

### Check wall material and structure

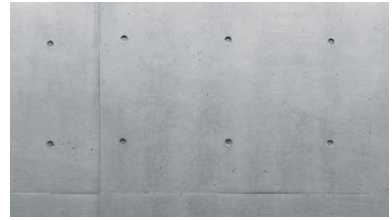
#### 1. Check it out by looking at it



Gypsum board with cross-lined

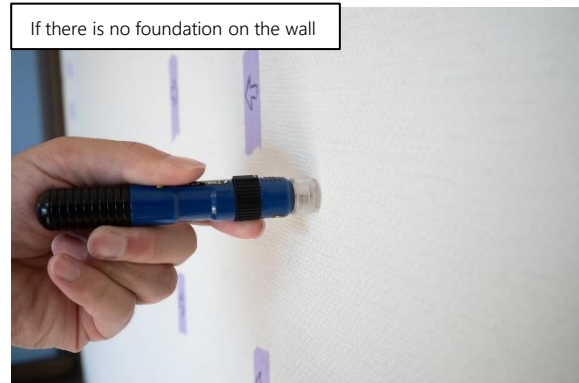
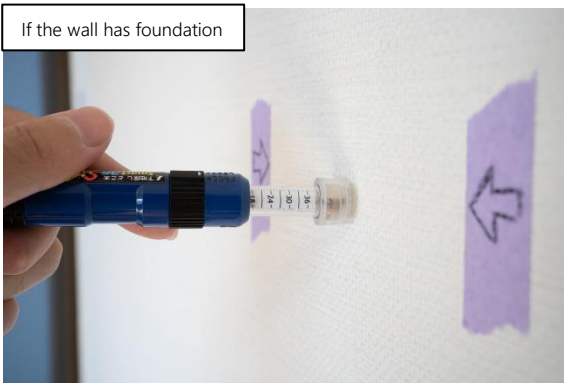


Wooden wall



Concrete wall

#### 2. Try pricking the wall with a thin needle



Stick a thin needle into an inconspicuous place on the wall. \* Use a substrate sensor (needle type).

If there is a substrate, the needle sticks and stops in the middle (about 15 to 25 mm).

In this case, it is often the case that the concrete or wooden wall is covered with cloth.

Also, if you look at the tip and see white powder on it, the wall is a plasterboard wall; if no powder is on it, the wallpaper is probably on a wood wall.

If there is no substrate, the needle will go all the way in. It is very easy to tell.

# Reference : How to choose the right screw for the material of the wall

Generally, screws used for fixing to the wall should be 4 to 5 cm long.

However, please note that the load capacity will vary depending on the material of the mounting surface and the condition of the substrate.

For example, plasterboard walls attached with picture hangers or interior anchors have a lower load-bearing capacity than wood or concrete walls.

Select screws that are thinner than the diameter of the holes in the attached wall anchors and screw heads that are larger than the diameter of the holes in the anchors.



Plasterboard

## **Screw type: Varies depending on the substrate**

Gypsum is the main ingredient of this material, which is commonly used in Japanese houses and condominiums.

The wall is hollow except for the back side where the substrate is inserted.

The gypsum board on the surface is easily crumbled and screws do not work, so it is necessary to put screws at the location where the substrate is placed.

The base material can be wood, metal, or concrete.

When placing screws, use screws or plugs that are appropriate for the substrate material.



Wooden wall (with gypsum board substrate)

## **Screw type: wood screw**

Wood screws can be used to drive directly into thick wood walls or when the base of the plasterboard is wood.

In most cases, there is no need to drill holes or use plugs. However, if the thickness is less than 11 mm, fix the wall to the base material at the back of the wall in the same way as when fixing to plasterboard.



Concrete wall (with gypsum board substrate)

## **Screw type: Anchor plug for concrete**

Concrete is a material that tends to deform easily, making it difficult for screws to work.

Therefore, a plastic or nylon concrete anchor plug is required.

The plug expands to fill the gap and hold the anchor firmly in place.



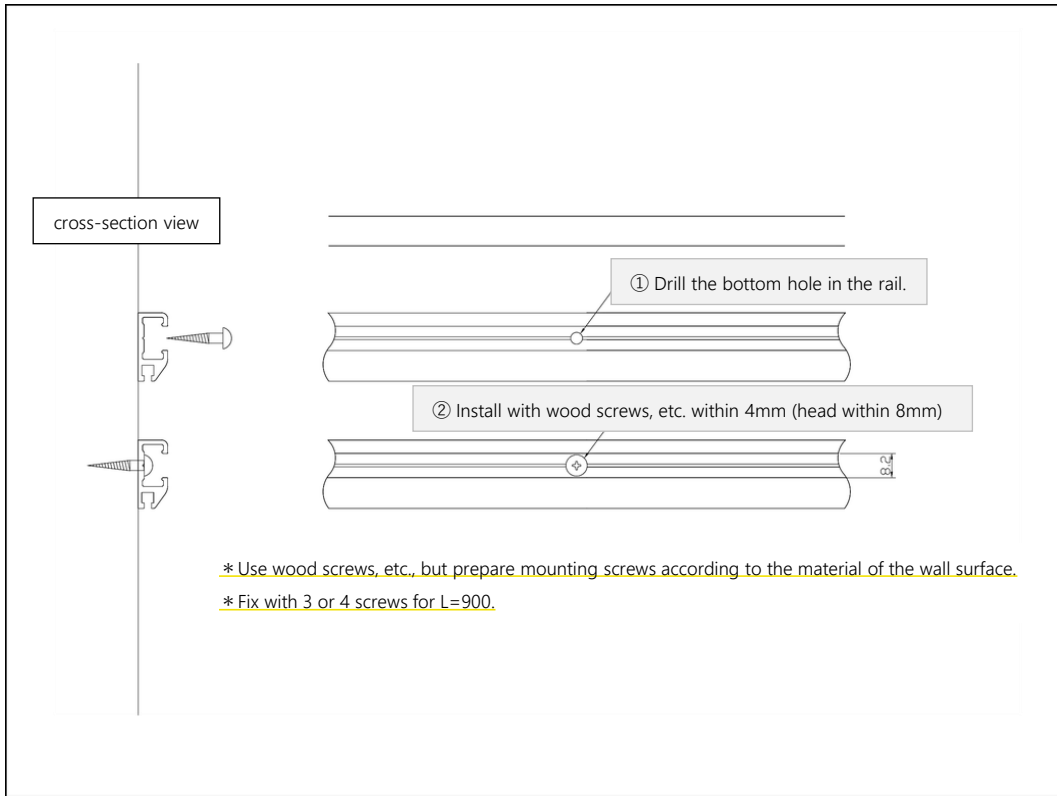
Metal (for plasterboard base: light steel frame)

## **Screw type: Tapping screw**

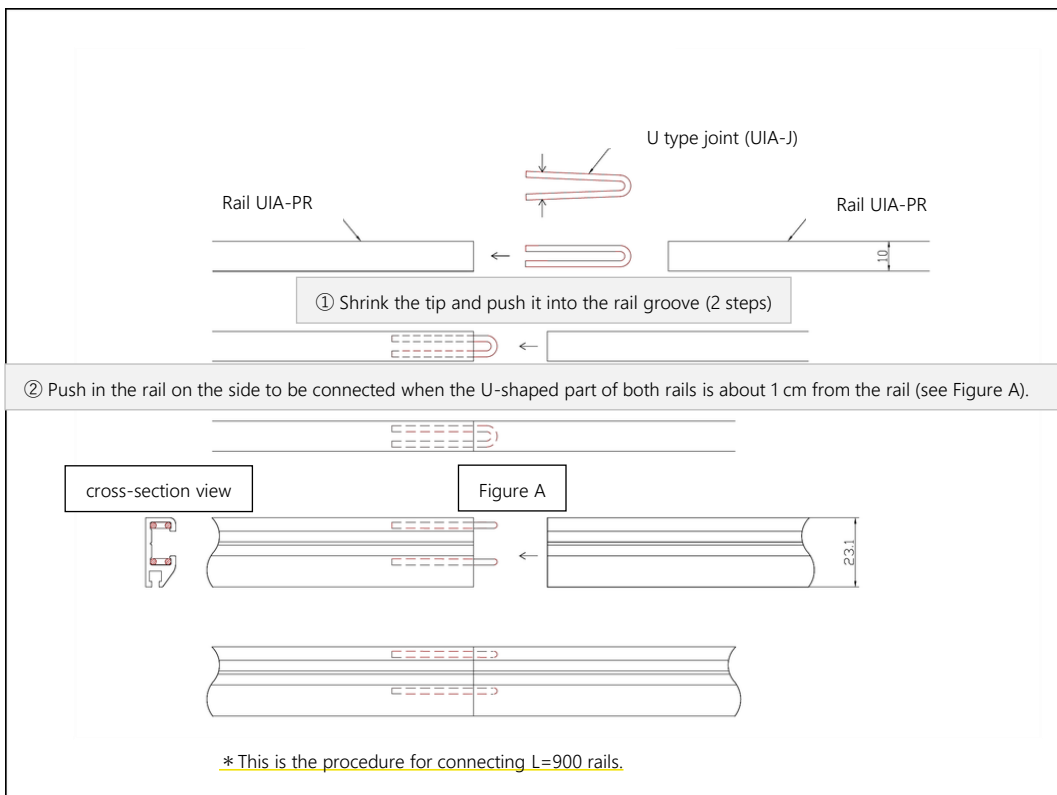
If the plasterboard base is metal, such as LGS (lightweight steel frame), use tapping screws that are threaded all the way to the neck.

Use a drill to make a pre-drilled hole with a smaller diameter than that of the screw, and use an electric screwdriver to tighten the screw.

## Work Instruction (rail)

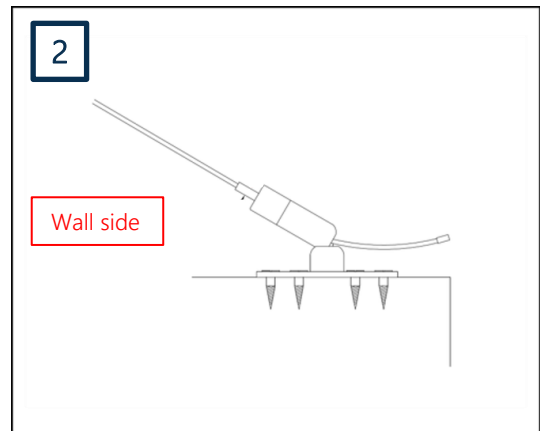
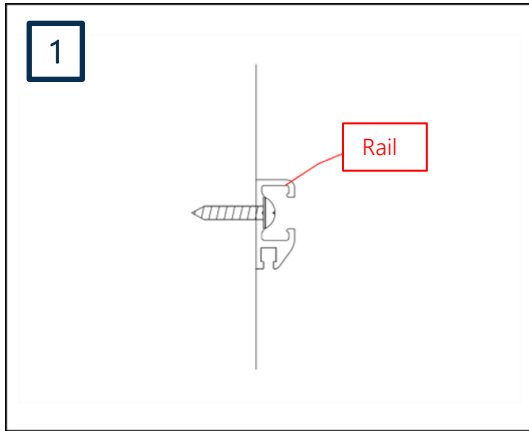


## Work Instruction (rail joint)



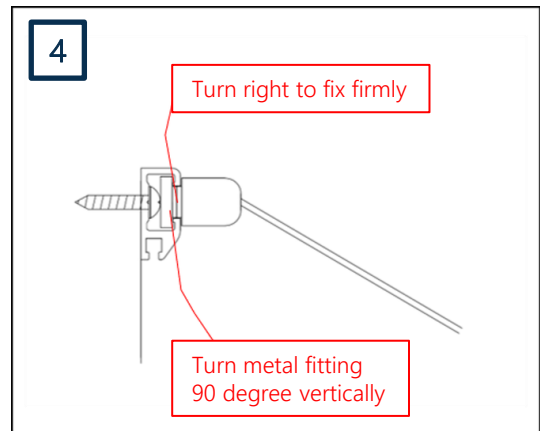
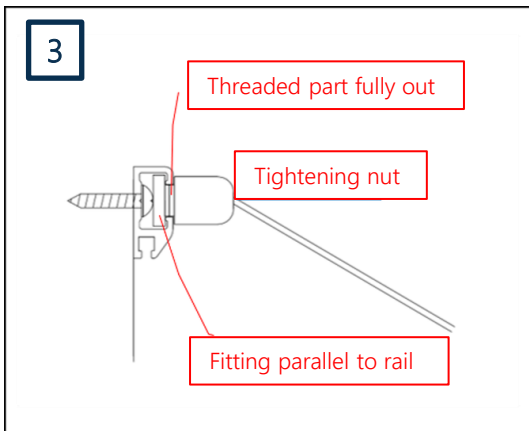


## Work Instruction (furniture stopper)



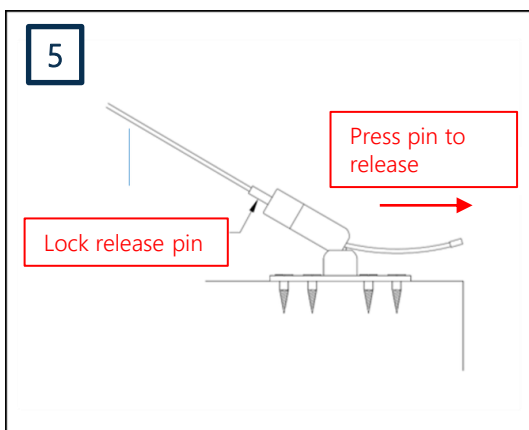
① When installing the rail, check the location of the substrate and install in a place where the screws will work.

② Attach the furniture stopper to the front edge corner of the top panel of the furniture with screws. Install the stopper where the top and side panels overlap, where it has the highest strength.



③ Turn the metal fitting of the attachment sideways and insert it into the rail. At this time, loosen the tightening nut of the attachment by turning it to the left, and fully let the threaded part out. Insert the attachment into the rail even from the middle of the rail.

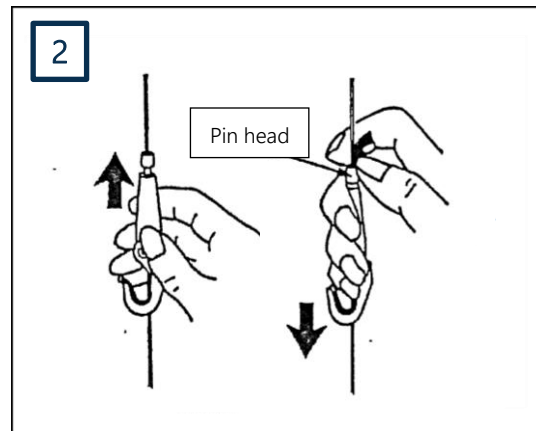
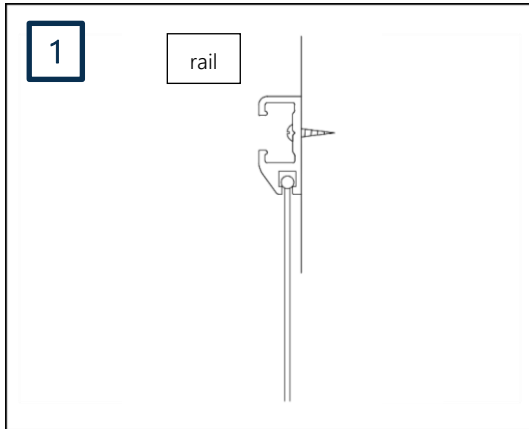
④ Place the attachment on the position where you want the furniture to be fixed. Turn the metal fittings inside the rail vertically, and turn the tightening nut of the attachment clockwise to fix it in place. After fixing the attachment, attach end caps to both ends of the rail



⑤ Pull the wire on the furniture stopper side to secure the furniture in place.



## Work Instruction (picture rail)



① Insert the ball at the end of the wire into the groove on the lower side

② Push upward by hand and lock in the released position.

Push hard on the pin head to unlock and to lower, press and hold the pin head while lowering. It locks in the released position.

## Attention

- Rail mounting screws are not included because the substrate is different. Please select screws that match the wall material.  
Recommended:  $\varnothing 3.5$  to  $\varnothing 4.0$ , length 30 mm or more
- Since the substrate position is different, we do not drill holes in the rails. Please check the substrate position before drilling.  
Recommendation: Drill holes of 4.5mm to 5.0mm with an electric drill, etc
- We recommend that the screws for rail mounting should be set at @450 for L=2,000.
- Furniture stopper UIA-S A does not include mounting screws. 4 screws are required per set. Please select the appropriate screws for the material of the furniture.
- M10 bolts for mounting furniture stopper UIA-S C are not included. 1 bolt is required for 1 pair. Please select the appropriate screws for the material of the furniture.
- When installing the rails, check the location of the substrate and be sure to install the rails in a location where the screws are secure. Please note that the strength of the screws will affect the safety strength of the rail.
- Depending on the mounting location, special metal fittings may be required.
- The wire on the furniture side of the furniture stopper should be fully extended from the grip. If the wire is just barely protruding from the grip, it may not be strong enough.
- After installation, check that the grips are locked.
- Do not apply paint or oil to the grips or wires.
- The installation method varies depending on the wall material.
- Please consult a professional contractor for installation.
- An installation angle of 15 degrees or less between the wall and the wire is encouraged.
- If installed incorrectly, the product may not be strong enough.
- We are not responsible for any damage or accidents caused by incorrect installation.
- This product is intended to minimize furniture sway and prevent furniture from falling over.

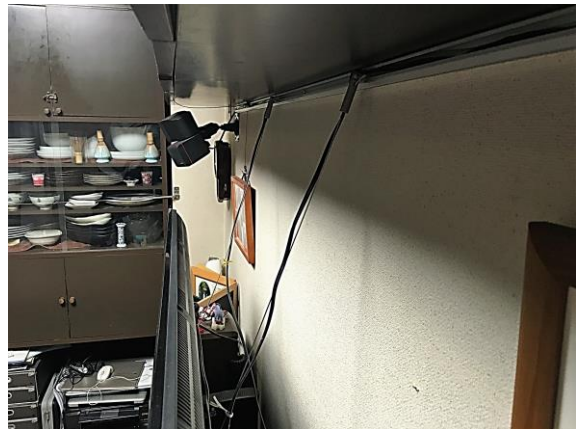
## Case Study

### ➤ Closet



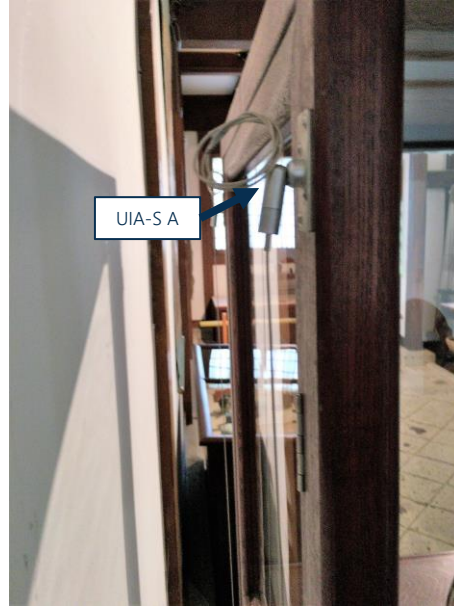
- The wire extends from the rail and is secured to the front side of the furniture.
- The top of the furniture is neat and the hardware is not visible.
- The length of the wire can be adjusted to accommodate the depth of the furniture.
- Furniture can be easily moved to the left or right by moving the hardware on the rail.
- Mounting hardware is not visible from the front.
- The rail provides ample space above the furniture.
- The wall-mounted rail also blends in with the room, creating no sense of discomfort.

### ➤ TV



Wire extends from the rail and is secured to the back of the TV

➤ An art museum



Because the client did not want to install the rail at the top edge for landscape reasons, the rail was installed at the bottom edge, out of sight, and installed wires along the shelf from bottom to top. Furniture stopper fixed at the top of the shelf



Even during the Great East Japan Earthquake, no art works were damaged due to the wire effect.

# FAQ

## Q1. What is the difference from other furniture fall prevention products?

In terms of function, it is the industry's first combined type of [furniture fall prevention] and [picture rail].

It can be used as a picture rail even if it is not used as a furniture fall prevention.

As for the furniture fall prevention measures, in an earthquake-proof experiment in which various furniture fall prevention goods were tested, if the metal fittings were firmly fixed, the product was stable even when shaken by an intensity 7 earthquake.

The biggest reason is our original grip.

Instead of a bearing type, which fixes the wire at a point, it is a shoe type, which fixes the wire at a surface, so there is less burden on the wire and the original strength of the wire can be maintained.

In other words, it is a wire type furniture fall prevention system that is safer and more secure to use.

## Q2. What should I do with excess wire? Can I cut it?

Loop and bundle excess wire.

Do not cut the wire, as this will cause the tips of the wire to break apart and make it difficult to get into the furniture stopper.

## Q3. Can the wire length dimension be changed?

Custom-made to order. Standard length is L=1,000mm, but longer lengths are also available.

## Q4. Is there a guideline for selecting furniture stopper UIA-S A, UIA-S B, or UIA-S C?

UIA-SA is suitable for fixing wooden furniture.

Fix with appropriate screws to the screw holes (4-φ3.5 holes - φ7 countersunk) on the plate base of the furniture side bracket. (Mounting screws are not included.)

UIA-SB is suitable for fixing medium and lightweight cabinets.

Furniture side hardware is M6 bolt (with nut). Fix to the M6 bolt holes on the furniture side.

UIA-SC is suitable for fixing heavy cabinets.

The plate base of the furniture side bracket has holes for M10 bolts. Fix with M10 bolts suitable for the furniture. (M10 bolts and nuts are not included.)

## Q5. Can the length of the rail be specified?

The standard length is L=900 x 2 pcs.

The material of the rail is aluminum.

**Q6. What should I do if I want to joint rails together?**

We have special joint materials available.

**Q7. How will the furniture stopper be fixed on the rail side?**

The rail side comes with an attachment to secure the wire to the rail.

**Q8. How should I determine the number of furniture stoppers?**

We accept orders for furniture stoppers in units of one set. For normal furniture, there will be two sets because they are installed on both sides.

If the furniture is wide, there will be three sets: left, center, and right. Please determine accordingly according to the wide dimensions of your furniture.

**Q9. Is there a recommended pitch for screwing rails?**

Usually @450.

For a rail L=900, 3 screws are required.

**ULG** ULTIMA Co.,Ltd.  
Ultima Line Grip