Backside of banister lights

historic room with fiber optic argand lamps.



DESCRIPTION: A track lighting system with every light hidden *inside* the track or the bannister itself. The surface mount tracks may be used on ceilings, under shelves or inside display cases. The bannisters can be used in historic rooms as pieces of furniture, as rails or hand guides or inside cases to other things in the room. There is no heat. There are no electrical connections. Individual luminaires clip in any place, aim, focus, and can be covered with a polycarbonate lens. Lights can be snapped in and out anywhere along the extrusion. Track can be cut and

mitered like wooden molding into any shape.

FEATURES:

- Luminaires aim up to 60° to each side
- Luminaires aim up to 15° longitudinally
- Luminaires mount anywhere in the extrusion
- Available in black anodize, white enamel, raw (for customer to finish) and custom colors
- Roll pins allow even joining end-to-end
- Can be mitered in the field and joined in almost any shape or configuration
- Polycarbonate lenses are available



PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

NoUVIR tracks screw to a surface and create a place to run fiber and snap in lights anywhere along the track. Since the tracks have no electricity, they make beautiful miter joints and have clean corners.

They produce bright, focused light with no heat. Luminaires can be aimed, focused, adjusted, moved, and even exchanged quickly and easily.

They remain secure until moved or readjusted. You have flexible mounting locations along with the wonderful control of aim and focus that you expect with NoUVIR.

Tracks are used in ceilings, dioramas, historic homes (as they surface mount without opening ceilings), touchable areas in children exhibits and in floors to light up from the carpet. Tracks are ideal for cases. Place a projector and the track and snap in flood or spot luminaires as needed as the exhibit comes together. Luminaires are easy to swap, move, re-aim and refocus over the years.



The case's closed door

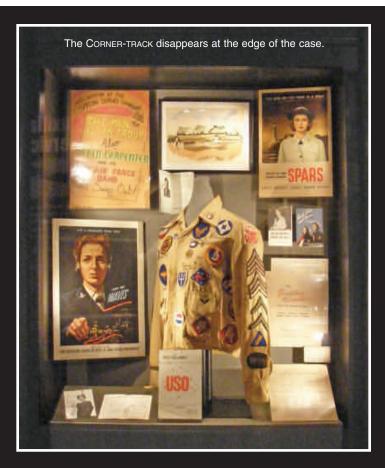


hides the

CORNER-TRACK

that holds the luminaires that light each shelf.

If you do not know what you will be lighting, try a track design with spots and a few floods.



Each projector will power 32 lights. It is common to light cases like these WWII exhibits with 10 to 12 lights using a single projector system for every three cases and linking the cases together thorugh the fiber. (If fiber runs are longer than 35 feet each,1,000 feet of fiber per projector, it will cost less to buy a second projector and use less fiber.) For larger cases, 16 luminaires are usually enough with one projector powering two cases. Large cases can take a whole projector or more depending upon what they light.

Usually a mixrture of spots and floods works well. Looking at the photometry, floods' beams are planned to overlap for a general wash to fill the case, light signs and create general lighting. Spots light the artifacts. Save Pinspots for special artifacts or for lighting objects in the room from the top of the case. Notice how NoUVIR fiber optics allow the top and the bottom of the case to be lit at the same intensity without sacrificing definition, indivuality or the variety missing in an even, boring wash of light.



PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES



Temporary walls cover windows with FBTC tracks mounted on top.

FIBER-RAIL bannisters provide an attractive round "track" that can be used as a bannister mounted to the floor, *made into or supplied as portable piece of furniture for historic houses*, used as a round track in cases or attached to walls, or be substituted as a match for any 2" or 4" diameter architectural bannister to conceal lighting. Fiber and luminaires are contained within the bannister behind a clear, tough, polycarbonate lens.

Freestanding bannisters can be a godsend for non-impact lighting of the finest of historic

rooms. Simply set in place, plug into an outlet and adjust lights. For painting galleries, bannisters remove glare and make forgrounds glow (as the light comes from below eye level), provide a tasteful, but solid barrier (protecting the art) and are handicap friendly for those unsteady on their feet.



Bannister furniture sits in this historic room, lights it, yet can be removed.



Bannister lights fragile painting on paper 3 fc.



NoUVIR's incredible control in aim and beam size lets you masterfully control light and shadow. Very sensitive objects can be lit without exceeding conservation lighting fc levels, and yet be perfectly framed without washing backgrounds or unused areas with distracting light. The artifacts stay the center and focus of attention.

Usually an AZ-EL luminaire on a bracket is all that is needed. But tracks add the ability to move things as you light for angles that get under shelves, reach hard locations, and aim around tall mounts.

This case is eye candy. Without NoUVIR's focus, the case and graphics would overwhelm the artifacts. Instead the case disappears, the graphics add support, and the artifacts stay center stage.



Built circa 1790, the room is staged circa 1830. The portrait is lit from the banister.

Three fibers from the banister slip into the room to power fiber optic candles.

Portable banisters are specified by the length of the rail (the piece of furniture) and how many lights are to be fitted into the rail. They almost exclusively use ZSFT MICRO-FOL Spots. Eight foot sections can be cut, joined together or mitered into 45° or 90° angles.

Square-bar is also considered a "track". Powered by bare fibers, it creates a soft, even wash from a 1" x 1" cross-section. A popular lighting design uses the bar to light everything in a case and then adds two to four hidden spots to highligiting special objects.



Behind closed door

center of case

SQUARE BAR lights sides and some of

no one sees the lights.

LUMINAIRE MOUNTING TRACKS AND BANNISTERS

PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

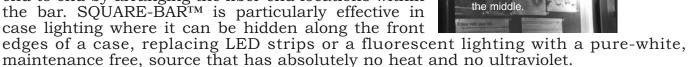


FLAT-TRACK is a surface mounted track system that securely holds snap clip equiped floods, spots *and pinspots*. It is the only track except

for the 4" banister that accepts a pinspot. FLAT-TRACK is a thin 1-1/4" wide x 1/8" high aluminum extrusion 8' in length. It

makes regular changing or adjusting of lights very simple as the track is open and accessable. Since it is designed to be well hidden from sight, this track only comes in bare aluminum, but it can be easily painted.

SQUARE-BAR track is a 1" square wall-washer. It comes in 4-foot lengths that can be easily cut for smaller cases or joined together for larger cases. Brightness is adjusted by the selecting the number of fibers fed into the bar from one to 32 (16 from each end). Intensity can be biased at a particular point or graduated from end to end by arranging the fiber end locations within the bar. SQUARE-BARTM is particularly effective in case lighting where it can be hidden along the front



Have you been told an LED has no heat? Set your hand on the case above the LED light bar. When you feel the warmth, you know why LED lighting is not NoUVIR lighting.

HEADLESS TRACKS

PRACTICAL, FLEXIBILE WAYS TO MOUNT FIBER OPTICS

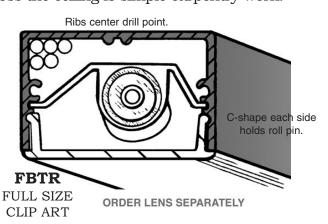
FBTR • FIBER-TRACKTM FIBER OPTIC TRACK FIBER TRACK - 8' LENGTH



FIBER-TRACK is a beautiful mount where luminaires need to be placed in plain view. Order track as **FBTR**

Snap a LBRT Flood or a ZDST Spot any place along the track. Aim. Focus the beam to the size you want. Leave it. The lamp is changed at the projector. The track comes in 8-foot lengths in black anodize, white enamel, raw for customer finish and custom finishes at extra charge. Lengths of track smoothly connect using roll pins to create long sections. Lenses snap in, but are only needed to keep hands out of track. Order lenses separately.

FBTR is a fiber optic track with only a 2" wide by 1-1/4" tall profile. Everything fits into the track. There are no lights hanging into the room. It looks like a thin line on the ceiling. Since there is no electricity, the track can be cut and fit in the field. Making corners, mounting under moldings or behind beams, even zig-zaging across the ceiling is simple carpentry work.



4-6

LUMINAIRE MOUNTING TRACKS AND BANISTERS

PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

FBTT • RECESSED T-BAR FIBER-TRACK FIBER BAR T-BAR TRACK - 8' LENGTH

FBTT is a FIBER-TRACK™ configured for T-bar ceiling applications. It is flush with the ceiling tiles and will work as a support strut. The top crown is designed to attach wires to for hanging. It offers all the flexibility of track lighting, but hidden flush as part of a T-bar ceiling, with no IR and no UV. Use a T-bar mount for the projector so it hangs itself above the ceiling, and you have something special. That's NoUVIR!



FBTC • CORNER-TRACK FIBER TRACK - 8' LENGTH

Make a frame around a case's window and light from any direction. Make an unpside-down U of track and hide the lighting in a proscenium arch. Retrofit a case with no mullions to hide lights and fiber in the track. Sneak track under the front of a shelf

ORDER LENS

SEPARATELY

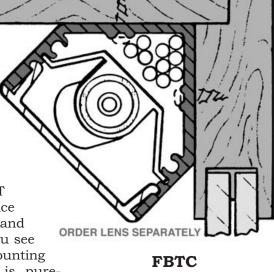


CORNER-TRACK retrofits most cases. Order **FBTC**



Makes clean 90° clean corners, Meets fiber's minimum bend radius.

der the front of a shelf and aim the light onto the shelf below. Install a track parallel to a wall to light hanging art. Only 2" wide by 1-3/4" deep to the corner point, CORNER-TRACK lets you install LBRT Floods or ZDST Spots any place in the track. Aim, focus, zoom and the light sources disappear. You see a simple, secure, easy to use mounting system. All the viewer sees is purewhite, stone-cold light. Polycarbonate 4' lenses available to keep hands out of the



FULL SIZE CLIP ART

lenses available to keep hands out of the track. Order lenses separately.



CORNER-TRACK installed at the top of a case's edge and down both sides or in the opening of a diorama's window makes a practical, very easy-to-install proscenium arch. The lighting acts like theater lighting in that you have control of angles and placement, can zoom the beams and bring attention to certain objects or areas.

All NoUIVR headless tracks have C-shaped holes in the extrusion that accept 1/8" roll pins to align and match joints in successive lengths of track. They can still be slipped apart, but tapped together with a rubber mallet tracks for a single long stick. A fine toothed carbide chop saw cuts track easily. Corners fit together to make perfect joints. The fiber comfortably makes the turn by kissing each side and cutting the corner.

PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

AFTL • POLYCARBONATE TRACK LENS

ACCESSORY FIBER TRACK LENS - 4' LENGTH

A tough, polycarbonate lens cover that easily removes for adjusting lights, but fits tight enough to keep the public out. For Fiber-track, Recessed T-bar Fiber-track or Corner-track, the lens comes in 4' sections. Two are required for each 8' length of track.

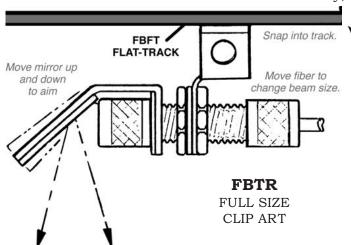
Track luminaires can be spaced as close as 4" but are easier to aim and adjust if they are 6" or more apart.

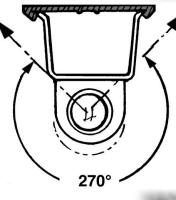
FBFT • FLAT-TRACK WIDE-ANGLE TRACK

FIBER OPTIC FLAT TRACK - 8' LENGTH

An economical 1-1/4" wide x only 1/8" tall track system with the luminaires fully exposed for easy aiming and focus. FLAT-TRACKTM hides behind beams, mullions,

reveals and moldings. Lights aim up to 270° around transverse axis and up to 15° longitudinally. Uses LBFT Floods, ZSFT Spots *and ZPFT Pinspots*. Track can be curved to follow an arch or dome. Wonderful for places the track will be hidden. Available in aluminum only, but easily painted.









FLAT-TRACK will securely hold a ZPFT pinspot as well as a LBFT Flood or ZSFT Spot. The track is versatile. It has been installed inside hollow beams and ceilings to shine through a slot or through holes to light artifacts in a room, on top of beams peeking over the edge of the wood to light alters or artwork, inside mock-up cases made of foam core or cardboard, mounted on top of museum cases to peak over the case's parapet to light birds or flags outside the cases and slipped behind decorative moldings. Installing stone-cold luminaires is a snap as the clip clicks into the track.

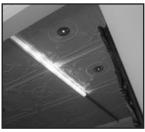




PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

SQBR • SQUARE-BAR WALL-WASHER

SQUARE **BAR** ONE-INCH SQUARE WALL-WASHER - 4' LENGTH





SQUARE-BAR gives an even wash.

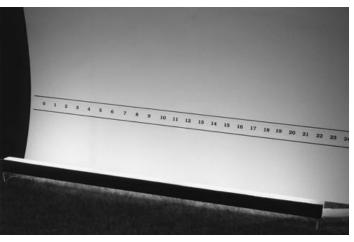
SQUARE-BARTM is a totally unique wall washer, with a tiny *one-inch-square cross section*. It comes in a 4-ft. length. But it can be cut or joined together, so it is useable in any length. Fibers are fed into the bar to provide any light intensity. Evenly spaced fibers produce an even, soft, cosine distribution. But, uneven spacing allows you to make a section of the bar brighter or dimmer than the rest.

SQUARE-BAR produces an amazingly smooth wash. Notice even with white art board next to the bar, there

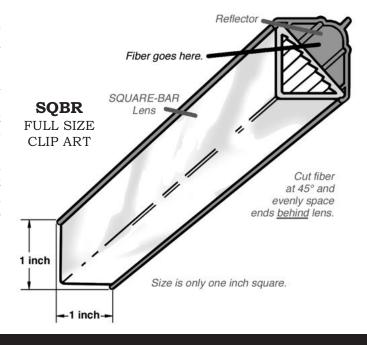
is none of the scallops, hot spots or lines of shadows seen in other "bars." Get the smooth output of an old fashion fluorescent, but for the first time, with excellent color rendition and no UV. Remove all the heat and glare of LED lights. SQUARE-BAR has absolutely no UV and no IR. It is perfect stone-cold lighting.

SPECIFICATIONS:

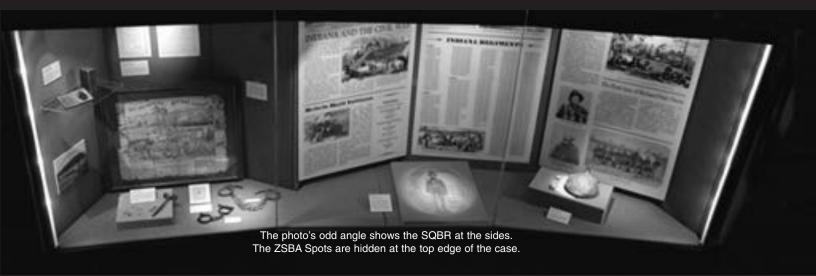
- 1" square x 51" length (includes 3" fiber collar)
- · Can be cut to any length in the field
- Soft, even, cosine distribution of light
- · Adjustable intensity



SQUARE-BAR can be cut to length. Order **SQBR**



Using SQUARE-BAR mixed with a few ZSBA Spots is a favorite design for museums with lots of graphics or cases packed full of artifacts. The bars automatically light the objects and signs. All the staff has to do is arange the artifacts in the case and aim and focus few spots to highlight the key objects. Without highlights, smooth washes can get mononous. A few spots break up the lighting design just enough to keep every case fresh.



FIBER OPTIC BANNISTERS

PRACTICAL, FLEXIBILE WAYS TO MOUNT FIBER OPTICS

FBRL-4 • FIBER-RAIL 4-INCH DIAMETER BANNISTER RAILING

MICRO-FOLTM spot in **FBRL-4**

FiBer Rail 4" dia. Bannister with mounting flat - 8' length

The FBRL-4 is a strong, 4" diameter aluminum bannister that matches the classic round bannisters often used by architects. It will hold ZSFT Spots and LBFT Floods, but is also large enough to conceal a ZSFT Pinspot. Luminaires are fully adjustable and protected behind a clear polycarbonate lens that is easy to remove for adjustment if you know how. Fiber-rail bannister provides security, a handhold for the elderly and beautiful glare-free lighting. It is made with a 2-7/8" flat on the bottom to make it easier to mount on custom posts, wall brackets or a clean 2x4. Wood veneer, patterned vinyls or wall coverings may be applied with a special edge in the design to make wrapping material around the bannister practical. Like the tracks, it can be mitered or joined together in the field. It is usually in stock in black, clear (silver) or brass anodize, but can be custom ordered in other finishes.

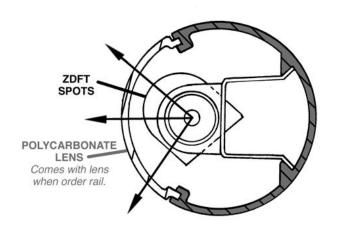
FBRL-2 • FIBER-RAIL 2-INCH DIAMETER BANNISTER RAILINGS

FiBer Rail 2" diameter complete round - 8' length



FBRL-2 is a 2" extruded aluminum bannister finished in a brass anodize that realistically matches other brass railing parts. Small ZSFT Spots and LBFT Floods mount anywhere along the rail, maintain their ability to aim

and focus, and are covered with a clear, tight fitting polycarbonate lens. Used for museum rails, it also works well for lighting staircases, arboretum paths, artwork and aquarium galleries.



Cross section of FBRL-2" diameter bannister.
Order **FBRL-2** for rail only.

FBRL-S • FIBER-RAIL 36" HIGH BRASS STANCHIONS FIBER RAIL STANCHION

Clear powder-coated, polished brass vertical stanchion stands 36" high with ball tee to accept 2" FIBER-RAIL in either 180° tees or 90° right angle fittings, tubing and stanchion plate.

FBRL-R • FIBER-RAIL 6" RADIUS CURVE FIBER RAIL - RADIUS CURVES

Clear powder-coated, polished brass tubing is bent around a 90° radius to join 2" FIBER-RAIL Bannister sections at 90° angles. You can miter bannisters, but sometimes you want a sweep.



stanchion is one support the rail bought separately.

FBRL-C • FIBER-RAIL 2" RAILING END CAPS





Clear powder-coated, polished brass end caps for FIBER-RAIL. Call NoUVIR for details as there are decorative choices and caps can be fitted with decorative rings for a rope hook.

PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

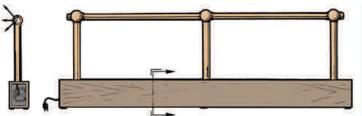
FBRL-2M • FIBER-RAIL 2-INCH COMPLETE BANISTER MODULE

FiBer RaiL - 2 inch Module

The FBRL Module is an 8' section of FIBER-RAILTM Bannister with three stanchions and two end caps built onto a 6"x10"x8' laminated MDF base. The base has room for a fiber optic projector and power supply (ordered separately, but can be factory installed), and is equipped with appropriate ventilation grills. Modules can be hooked together end-to-end, joined to additional 2" railing or parts, or joined at 90° angles. A projector in one module can power lights in adjacent modules. The system is portable. As freestanding furniture the FIBER-RAIL is ready-to-use and allows you to light a historical room without construction or modifying the building. FIBER-RAIL



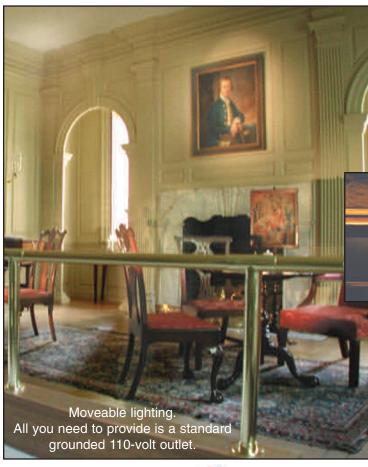
is handy for traveling exhibits, cars, coaches and carriages as it lights at angles that enter windows and doors yet will move for parking. It is nice for large paintings as people like to rest their hands on the rail to gaze and ideal for temporary exhibits to protect artifacts from crowds, yet provide light.

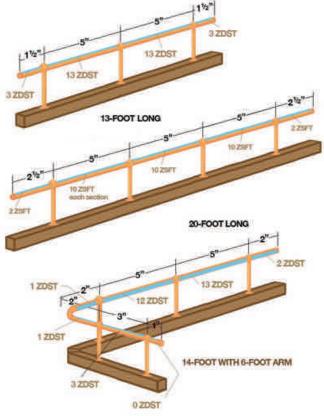


For a freestanding bannister module, order **FBRL-2M** Includes wood base, three stanchions and end caps. Add projector, power supply, fiber and luminaires as needed. Call for details for custom sizes and bannisters with the fiber optic lighting installed ready to use out of the box.

A NoUVIR bannister can be a solution to a tough problem. All this dark and spooky servants' staircase needed to make it inviting was light on the treads cast from the bannister itself. The rest of the space and the ceiling above it was not impacted. But it made the staircase safe.





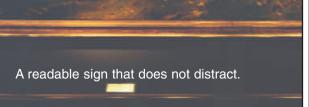


PRACTICAL, FLEXIBLE WAYS TO MOUNT FIBER OPTIC LUMINAIRES

INRL-4 • INNER-LIGHT SIGN FOR 4" BANNISTER

INNER LIGHT FOR 4" DIA. BANNISTER

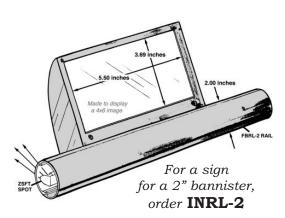
DESCRIPTION: Lit from the inside by a single fiber, this sign for the 4" Bannister is incredibly readable. Yet it does not create the glare or bright distraction lighting a sign at levels seniors can read in a darkened gallery. The sign is durable aluminum, 6-1/4" x 12-1/4" overall with a display area of 5-1/2" x 10" for the graphics.





INRL-2 • INNER-LIGHT SIGN FOR 2" BANNISTER INNER LIGHT FOR 2" DIAMETER FBRL-2 BANNISTER

A smaller version of the Inner-light sign is made for the 2" bannister. The sign is incredibly clear, but remains subtle and unobtrusive compared to the art. This tough, aluminum Inner-light sign will mount and lock anywhere along the 2" rail.



Graphics are sandwich between two acrylic sheets. The sign is 4-5/8" x 6-1/4" with a frame aperture of 3-3/4 x 5-1/2 (a standard 4" x 6" photo). It uses only one 3mm fiber to light the sign. As is true with both signs, the footlambert level can be controlled and is bright enough to transilluminate images as well as words. Usually reverse type with a black background makes the most readable, yet passives signs, letting the artifact stay the center of attention.





For some exhibits, fiber optic track in the floor works better than light from the ceiling. FBTC CORNER-TRACK is cut to form an arc using miter joints, then slipped under the floor covering. The visitors do not see the line in the Tarmac. But the car sparkles as if lit by the ground lighting of a speedway.

