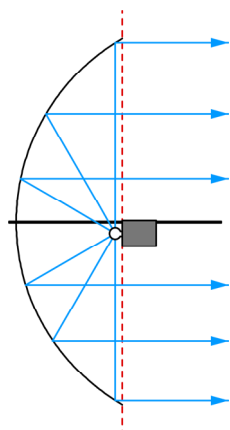


PLM™ Parabolic Light Modification System

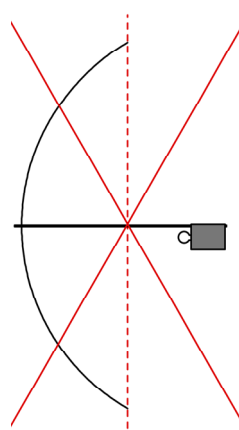
The **PLM™ System** is a **Paul C. Buff, Inc.™** product. Please contact us if you need any assistance!
Email info@paulcbuff.com or call us **toll free 1-800-443-5542** (Monday - Friday, 9 am - 5 pm, CST).

> Opening PLM™ Umbrellas

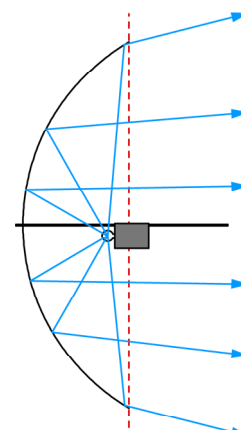
The recommended method of opening PLM™ umbrellas is to stand the closed umbrella vertically, with the point down, and tap the point gently on the floor. This will cause the umbrella to begin to spread open without the 16 spokes tangling together. Then simply reach into the partially open umbrella and slide the spoke connector down until it clicks into the fully open position.



Position A - preferred



Position B - do not use



Position C - wide angle

Using Silver PLM™ Umbrellas

> Position A of Light Unit for Maximum Output

When the flash unit lamps are positioned approximately at the outer edges of the umbrella fabric, essentially all the light output is directed to the umbrella fabric, filling the umbrella evenly and completely.

With the silver-finished PLM™ umbrellas, the angles are such that the light leaves the umbrella as a highly focused shaft of light with a narrow coverage angle and extremely high on-axis output. This is the preferred configuration for shooting situations requiring extremely high output from a very large light source, yielding similar evenness, shadow softening and catchlights to that obtained from softboxes of comparable size, but with vastly higher light output. Because of this extreme output, overpowering the sun for fashion work is easy to accomplish with low to modest power flash units.

Preliminary tests of silver PLM™ umbrellas with an AlienBees™ B800 flash unit set to 250Ws produced a beamwidth of approximately 40°, with a metered flash output of f22 at ISO100. The face of the umbrella was positioned 10 feet from the measurement surface. The room was 14' x 16' with a 9' ceiling. Tests conducted outdoors produced a similar coverage angle and output.

The silver PLM™ umbrellas may be used without the reflector for maximum light output. This use will result in a slight amount of spill light from the side of the umbrella. If the PLM™ 7" reflector is used, the side spill light is completely eliminated and the output is approximately 1/4 f-stop less.

> Using the Optional Front Diffuser Fabric

Position A should always be used whenever the front diffuser fabric PLMXX-WFDF is attached to convert the silver PLM™ umbrellas to a quasi-softbox.

Attach the front fabric to the PLM™ umbrella before putting the umbrella on the flash unit by simply placing the metal grommets of the diffuser panel on the ends of the umbrella rods. Then put the umbrella onto the flash unit and rotate the umbrella so that the flash unit is centered in the hole in the diffuser panel. Best results are obtained by using the optional PLM™ 7" reflector:

With the front diffuser fabric attached, the coverage angle increases to over 100° and the lighting effect replicates that of a conventional softbox of comparable size, with very soft and even lighting of the subject and very even light across the face of the unit. Preliminary tests with front diffuser fabric yielded f8+5/10f at 10', ISO100 from an AlienBees™ B800 set to 250Ws.

> Position C of Light Unit for Wider Coverage

When using the silver PLM™ umbrellas without the front diffuser, the pattern

can be defocused by sliding the flash unit lamps in from the outer edges of the umbrella by 4 to 8 inches. In the studio, this is best done by observing the light pattern of the modeling lamp. By defocusing in this manner, the pattern can be widened to about 80°, with a resulting output of approximately f16 at 10', ISO100 from an AlienBees™ B800 unit set to 250Ws. If the light unit is slid too far into the umbrella, the center of the pattern will begin to darken, causing uneven subject lighting.

Using White PLM™ Umbrellas

Position A should always be used on white PLM™ umbrellas for optimum results. The umbrella will be perfectly filled and the white surface will be evenly illuminated. The optional PLM™ 7" reflector will block any undesired direct side spill, but is not necessary in most uses. Because of its virtually round shape and extremely even surface coverage, the white PLM™ umbrella yields outstanding softness and excellent catchlights, whether used as a bounce or shoot-through style umbrella.

> Using the Optional Front Diffuser Fabric in Bounce Mode

Attaching the optional PLMXX-WFDF diffuser fabric results in a superb quasi-softbox with an output of about f8 at ISO100, 10' using an AlienBees™ B800 flash unit set to 250Ws. However, a substantial amount of spill light will be emitted from the back, curved portion of the quasi-softbox. This back spill can be eliminated by adding the optional PLMXX-BOC black outer cover before attaching the front diffuser fabric. The black outer cover can also be used for spill control when using the white PLM™ umbrella as a conventional white bounce umbrella without front diffuser fabric.

> Shoot-Through Mode

When an extremely wide angle light source is desired, especially when placing the light very close to the subject, the white PLM™ umbrella can be used in shoot-through mode, with the curved side facing the subject and the light passing through the fabric instead of bouncing off its surface.

Light output in shoot-through mode is approximately the same as in bounce mode. Again, a substantial amount of spill light will be bounced toward the camera. This can be eliminated by attaching the optional PLMXX-BFSPKF (Black Front Spill Kill Fabric). This fabric attaches in the same manner as the Front Diffuser Fabric. Attach the PLMXX-BFSPKF to the PLM™ umbrella before putting the umbrella on the flash unit by simply placing the metal grommets of the diffuser panel on the ends of the umbrella rods. Then put the umbrella onto the flash unit and rotate the umbrella so that the flash unit is centered in the hole in the diffuser panel. Best results are obtained by using the optional PLM™ 7" reflector: