sinar bron

Spring/Summer 1991

$3.00

Reflections of Michael Furman

He is one of America's premier photographers, recognized for his strong graphic style, refinement in lighting and elegance of design. His Philadelphia studio assignments range from cars and computers to abstract still life, faces and bike races. National clients include Apple, AT&T, DuPont, Kodak, Panasonic and American Express. Top awards have come from the Art Directors' Club of New York, Communication Arts and AIGA. His work is seen regularly in American Showcase, Adweek Portfolios, Archive and Photo/Design.

"I take pictures because I want to make a visual statement about the world around me. My objective is to capture the essence of the subject in the fewest possible terms. I like to keep things simple!

My photography is a journey of discovery to what something is about. When people look at my pictures, they often see something that may have escaped them before. If I succeed in touching their emotions, so much the better.

Take the picture of the Ferrari; the photograph is composed of very few graphic elements. It has very few lines. And yet, each of them is vitally important because it cuts right through to the heart of what that beautiful car is all about!

The image was intentionally designed to be assembled in a computer, the Quantel Graphic Paint Box System. Both halves of the final piece were shot with full awareness of how they were going to appear together. How they look separately is completely irrelevant. The end concept is the only thing that matters.

Photographers should realize that what really counts is the quality of the communication of the final image. How we arrive at that communication is beside the point, such as whether the image is created in the camera, in the darkroom or in the computer. The viewing audience doesn't care how it was done. All they care about is what's in front of them and, ultimately, how it affects their perception of reality.

In today's competitive marketplace, large format photographers ought to be knowledgeable about graphic computers, electronic retouching and reproduction, all tools to improve their work. Photography alone, however exquisite, is no longer sufficient. You must know 4-stop photography to ensure that the image will reproduce the way you want it, the way the client wants it.

And, of course, having the right preparation and equipment helps. I could not possibly have undertaken this assignment without my extensive Sinar camera system and my Broncolor 100x300" Giant Light Bank. There are no short cuts to success.

Some people say my photography is artistic. Although I often find artistic qualities in many commonplace objects, my primary job as photographer is one of communication. Do I think of myself as an artist? Not at all.

I think of myself as a communicator.

" . . . Of course, having the right equipment and preparation helps. There are no shortcuts to success."
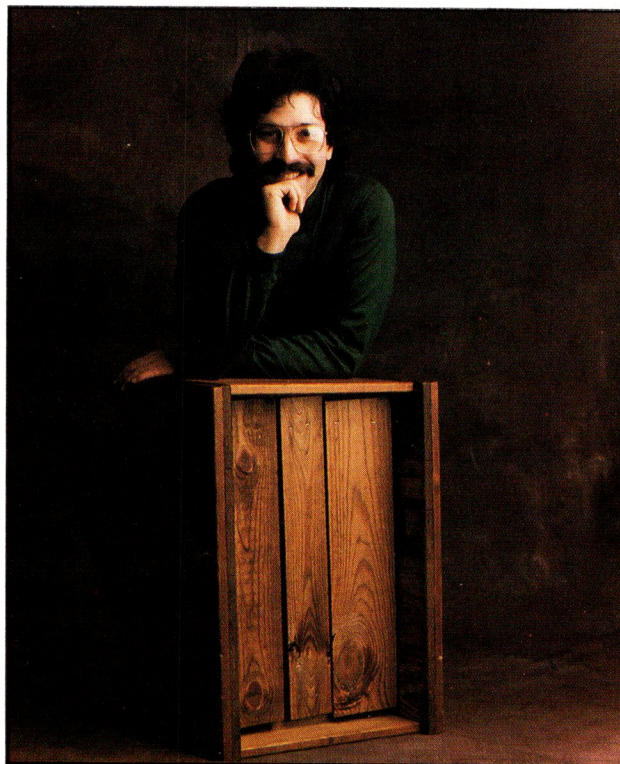
-Michael Furman

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EDEN ROBBINS

In This Issue . . .

Learn some inside secrets that will allow you to create a wide range of professional special effects with no improvisation and no hassle. Multiple exposures, complex lens shading techniques, vignetting and color blends all made easy.
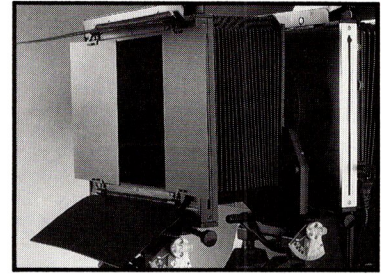
Find out about some exciting new additions to the Sinaron lens series. They include a three new Apo lenses, a pair of extremely versatile Macros and a group of Apo process lenses designed for a wide range of reproduction ratios.

Explore the expansive range of the Broncolor system, including some exciting new additions coming this summer. Check out the new comparison chart to find the combination of features to perfectly suit your requirements.
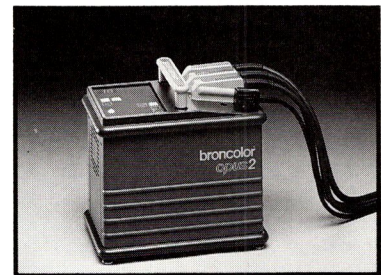
Banish gaffers tape from your studio once and for all when you find out how to be creative with Combitubes. Learn to rig up stable light supports, versatile gobo holders and other types of vital grip equipment.

Plus expanded information on Sinar Color Control Filters and Foba shooting tables, and details of the new products introduced at Photokina 1990.

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FOBA
STUDIO ACCESSORIES

JUST Transparency Viewers

Pro-Cyc

New Products!

EDEN ROBBINS

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Why Large Format?

Large format photography offers solutions to many of the most common problems encountered with small and medium format cameras.

Increased control over perspective, depth of field and the plane of sharp focus gives you the ability to produce more polished, professional results.

The individual sheets of film that view cameras use allow you much greater flexibility in processing. Each sheet can be processed to its own individual requirements, instead of having to develop an entire roll of images together.

Large format photography is a much more deliberate way of creating images. Setting up a shot requires more concentration than the point-and-shoot style of smaller formats. The end result shows the benefit of careful planning.

Naturally, the larger film size carries more image detail than 35mm or medium format frames. That means you'll produce sharper images with less enlargement required.

When it comes to reproduction, large format photography has it hands down over smaller formats. With measured photography the photographer can ultimately control his final image. No more wondering how your images will reproduce.

Of course nothing makes a more striking impression than a large format transparency, especially when you compare it to a sheet full of tiny 35mm slides. With a large format chrome, the client is likely to spend more time viewing each image.

For special effects photography, nothing compares to the large format camera. With the large ground glass

the planning and executing of the photograph becomes much easier than on a small format camera, whether you are using an in-camera-masking device or multiple camera sets in which the film is moved from set to set to build the image that you have in mind.

No matter what kind of subject you care to photograph, may it be Studio, Industry, Nature, Architecture or Reproduction, let us at Sinar Bron show you the way.

1-(800) 456-0203
Orders and Information

Depth of Field Control

By tilting either the front or rear standards toward the plane of the table, you satisfy the Scheimpflug rule of intersecting planes. The geometric planes passing through the lens standard, film plane and the plane of focus in the subject, intersect at a common line in space. Thus, you can achieve maximum sharpness with only minimal stopping down.
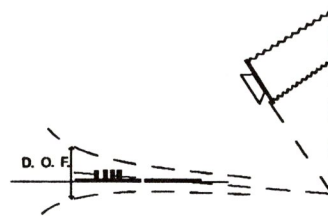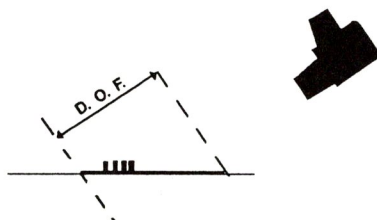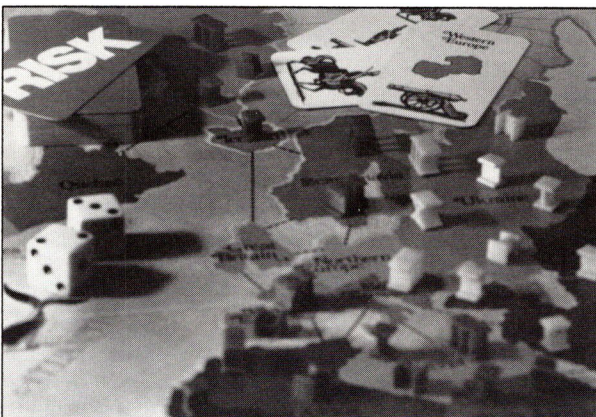
Why Large Format?

Perspective Correction

Changing the angle of the film plane relative to the subject , as when you point the camera up at a building, will change the perspective of the subject. Bringing the image standard parallel to the building, instead of tilting it upward as with 35mm, maintains a natural perspective instead of the "falling backward, " or keystoning effect.
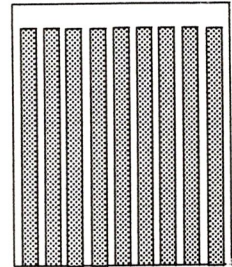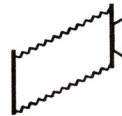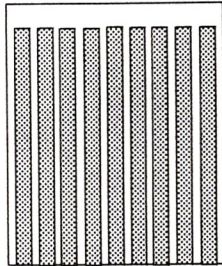
Selective Sharpness Distribution

Unlike smaller format cameras, a view camera's movements allow you to control your plane of sharpness. Instead of stopping down to get the whole image sharp, the view camera allows you to place your plane of focus optimally in relation to the subject.

Plane of sharp focus

Plane of sharp focus /

5
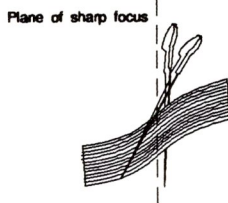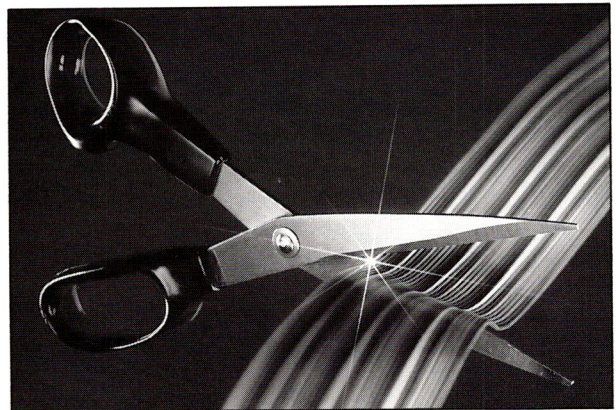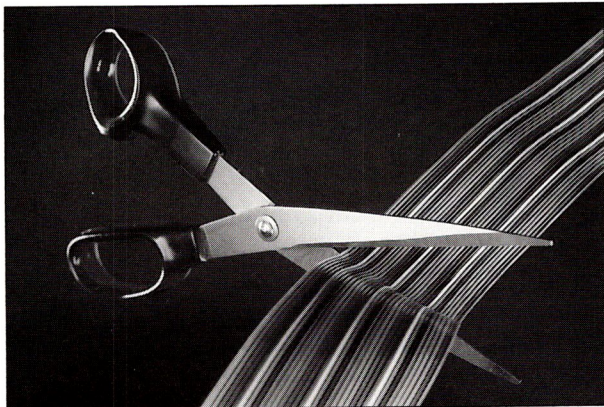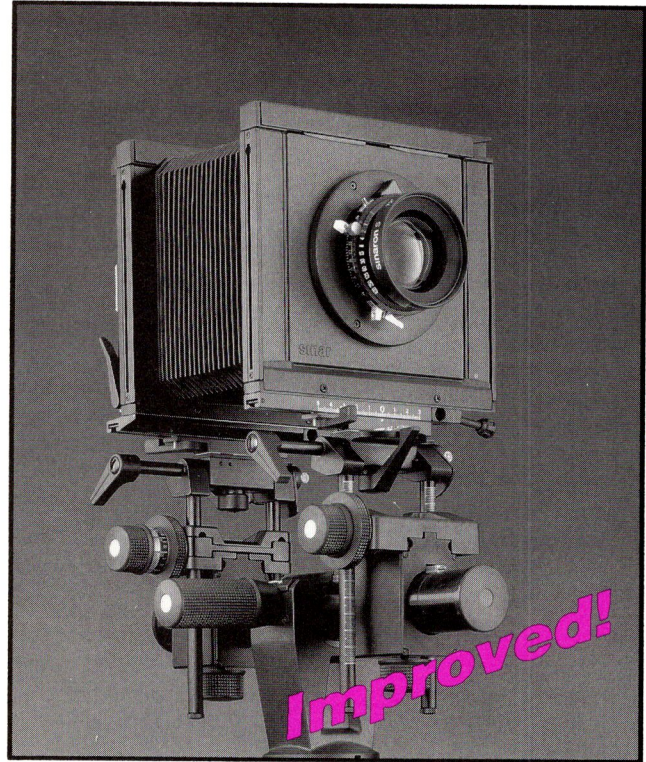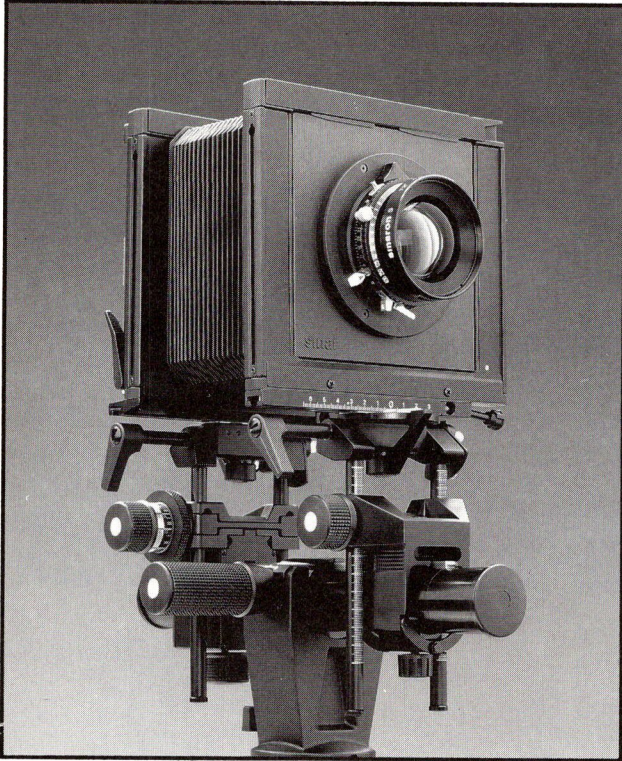
SINAR f1 4x5 View Camera

The SINAR f1 camera features rear standard with cylindrical angle-metering scale, depth of field scale, p2 style knobs, right hand operation, and 1/4 turn vertical displacement lock. The front standard has an open clamp which makes it the ideal multipurpose standard if the f camera is upgraded to a f2 or a p2 model.

Maximum Extension with Standard Bellows:	18"
Minimum Extension:	1.5"
Standard Rail:	12"
Weight:	7 lbs.

21-1005 .... **$1265.00**

SINAR f1 5x7 View Camera

Maximum Extension with Standard Bellows:	20"
Minimum Extension:	1.5"
Standard Rail:	12"
Weight:	10 lbs.

21-1009 .... **$3990.00**

Lenses & Lensboards
See pages 30-34

SINAR f2 4x5 View Camera

The SINAR f2 view camera offers several features which make it one of the best selling cameras in the world. First is the angle calculator on the rear standard for easy and precise determination of tilt and swing angles. Then there is the metering back, fine focusing adjustment of the front standard and enclosed front rail clamp. You may also change the format of the f2 camera if you wish by upgrading the rear standard and bellows. **The new improved f2 also features separate and more positive swing and shift locks for even easier operation.**

Maximum Extension with Standard Bellows:	18"
Minimum Extension:	1.5"
Standard Rail:	12"
Weight:	8 lbs.

21-1007 .... **$1899.00**

The SINAR f cameras are the budget priced entry into the SINAR system. These lightweight cameras are ideal for location, travel and outdoor photography. Utilizing the patented two point focusing system, you can quickly set the camera for almost any photographic situation. Once the camera is set, use the depth-of-field scale to find the proper f-stop and optimum focus point. Consider the f (f is for field) your professional launching pad into the extensive SINAR system.

SINAR f View Cameras
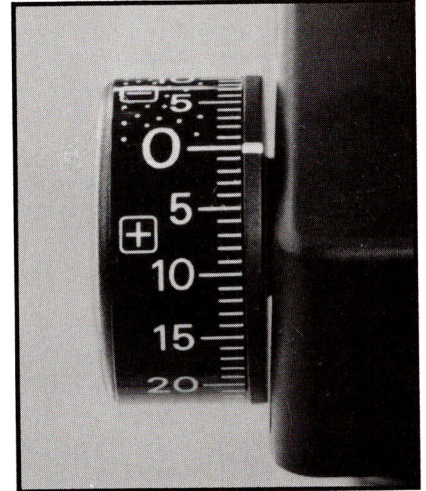
With SINAR's angle meter scale both swings and tilts can be figured out quickly and precisely.

SINAR f1 8x10 View Camera

In addition to all the other features of the f-series cameras, the f1 8x10 also includes spring-loaded rise and fall on the rear standard and an f2 front standard.

- •Maximum Extension With Standard Bellows: 28"
- •Minimum Extension: 2"
- •Standard Rail: 12"
- • Weight: 16.75 lbs.

21-1002 .... $3199.00

SINAR f2 8x10 View Camera

The f2 8x10 features a special front standard which provides greater stability and additional shift range.

- •Maximum Extension With Standard Bellows: 28"
- •Minimum Extension: 2"
- •Standard Rail: 12"
- • Weight: 18 lbs.

21-1004 .... $5175.00

Accessory Shoe
23-4020 .... $47.00

SINAR f-series View Camera Features Include:	f1 8x10	f2 4x5	f1 4x5
•Two point focusing system for easy setting of both tilt and swing angles	✔	✔	✔
•Built-in depth-of-field scale for quick setting of optimum aperture	✔	✔	✔
•Yaw-Free movements	✔	✔	✔
•Metering back for super accurate exposure readings with either the Booster, Sinarsix Digital or the Broncolor FCM with probe.		✔	✔
•Fluid dampened back for easy film holder insertion and removal			✔
•Spring loaded rise and fall mechanism on the rear standard			✔

Adjustment data

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For the photographer on the go SINAR offers the f Image Kits. These kits are available with either the f1 or the f2 4x5 camera.

The Image Kit can easily be used for studio, architecture or even landscape photography, all in one easily transportable case.

Besides the camera and Image Kit accessories, the Image Case has room enough to store a Polaroid 545 holder, an extra 12" extension rail and 6 sheet film holders. The Image Kit comes in a very handy briefcase-styled case, which fits in most airline overhead storage bins.

Now with 150 mm sinaron lens!

Image Kit Accessories

150mm **sinaron** f5.6 Copal Lens*
6" Extension Rail
4x5 Wide Angle Bellows
Bellows Holder (2)
4x5 Fresnel
Filter Rod
Reducing Bushing
f1/f2 Image Case

SINAR f1 Image Kit
Equipped with a SINAR f1 4x5 view camera plus the Image Kit accessories.
21-5008 .... $2275.00
Save $410 over purchasing components individually!

SINAR f2 Image Kit
Equipped with a SINAR f2 4x5 view camera and all Image Kit accessories.
21-5009 .... **$2825.00**
Save $494 over purchasing components individually!

sinar f2 4x5

22-1022
23-1204
23-2211
23-1208
23-1001
23-3004
23-2212
23-1204
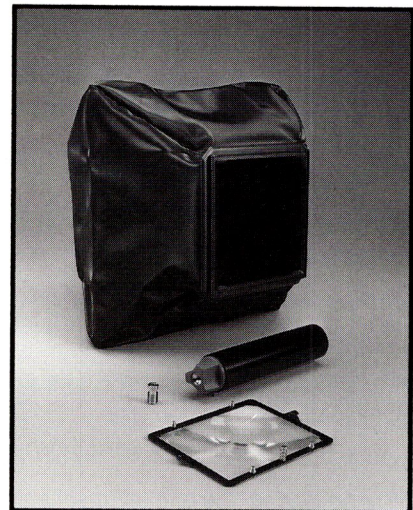
Black Accessory Kit
The Black Accessory Kit provides some of the basic accessories you need for your 4x5 SINAR. It consists of a 6" Black Extension Rail, 4x5 Fresnel Lens, Wide Angle Bellows and 3/8" to 1/4" Reducing Bushing.
23-7056 .... **$495.00**

The SINAR c2 (Combination) camera gives you the precision of the p2's micrometer-driven settings with the light weight and lower cost of the f2 camera.

The c2 takes advantage of SINAR system flexibility by combining the rear standard of the p2 with the front standard of the f2. You can use the asymmetric movements on the p2 rear standard to precisely determine swing and tilt angles, which you then set on the f2 front standard.

You can easily upgrade the c2 to a full p2 by adding a p2 front standard. The original f2 standard can then function as a multipurpose standard for use as part of a compendium lens shade or an intermediate bellows support.
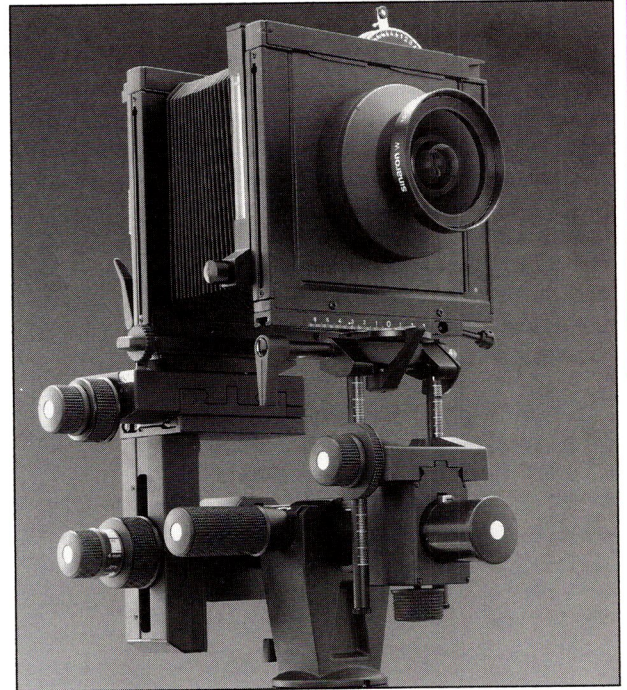
SINAR c2 8x10 View Camera

The SINAR c2 8x10 camera features the p2 8x10 rear standard with asymmetric swings and tilts and depth of field scale. The special f2 front standard features additional shift range and heavier posts for greater support.

- Maximum Extension With Standard Bellows: 23"
- Minimum Extension: 2"
- Standard Rail: 12"
- Weight: 17.2lbs.

21-3303 .... **$7245.00**

SINAR c2 4x5 View Camera

The SINAR c2 camera features the p2 rear standard with asymmetric swings and tilts and depth of field scale. The f2 front standard features an enclosed front rail clamp and fine-focusing drive.

- Maximum Extension With Standard Bellows: 18"
- Minimum Extension: 1.5"
- Standard Rail: 12"
- Weight: 10.5 lbs.

21-3301 .... **$4125.00**

Sinar, to me, is the ultimate 4x5. We have cameras that we've been using for 10 or 15 years, and I'm amazed by their durability. We shoot an average of 30 pictures a day, and the Sinars have been workhorses for us.

And when I need service, I just pick up the phone and dial that 800 number. Everyone's really friendly, and they'll help you out when you've got a problem. I've even had the president call me up when we were having trouble — to me, that really says a lot about a company.

—Tim Palmer
Mail & Media, Atlanta, GA

Call

1-(800) 456-0203

For orders, information and technical support

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When p stands for perfection you could only be talking about the SINAR p2 camera. The p2 is based on asymmetric tilts and swings, not the traditional center or base tilts. This means rapid and precise settings, without ever losing sharpness on the axis.

The precision micrometer drives on the p2 are not only smooth, but also self-arresting. Once a movement is set, it stays - no more wrestling with locking knobs.

Professional photographers have long appreciated the quality and value of the SINAR line of view cameras. When you purchase a SINAR view camera you are not only purchasing many of the exclusive SINAR features, but also over 40 years of experience in large format, as well as complete system interchangability.
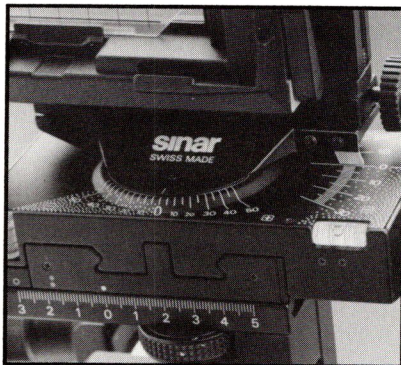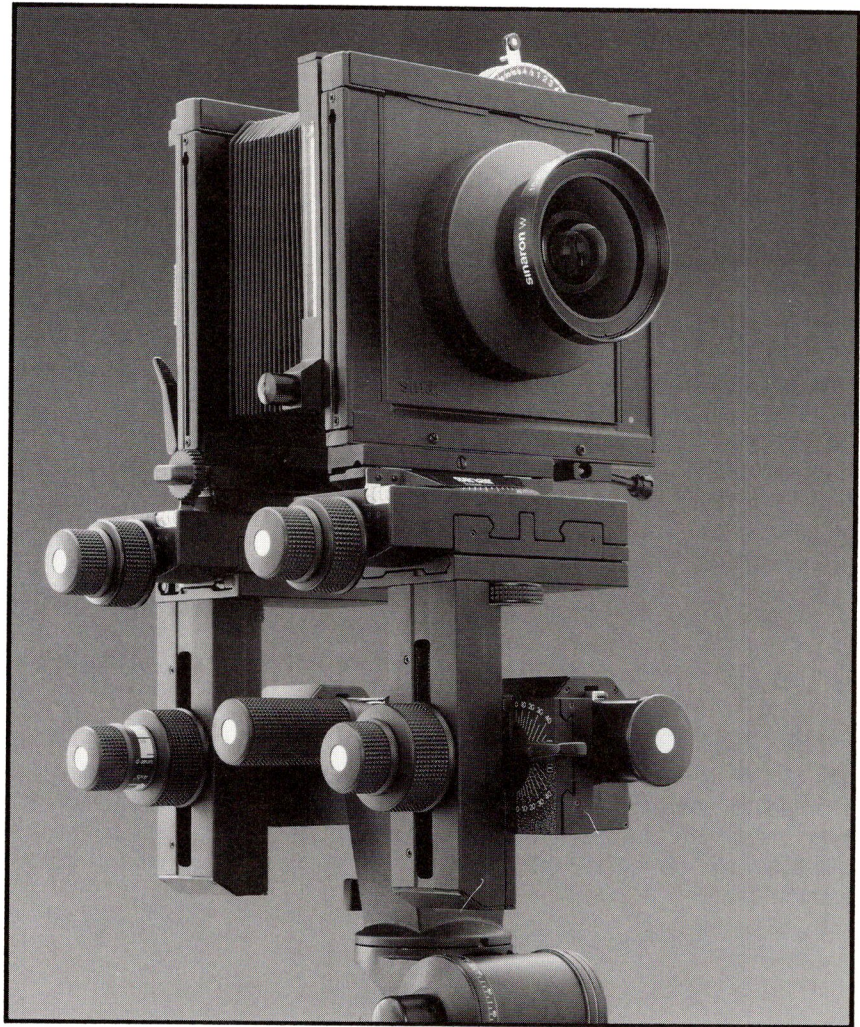
Precision Micrometer Drives
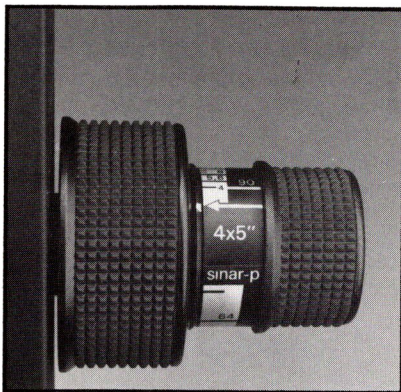
Depth-of-Field control

SINAR p2 4x5 View Camera

Equipped with SINAR p2 front standard, SINAR p2 rear standard, 12" basic rail unit, rail clamp, bellows, metering back, ground glass and plateholder for 4x5 format.

- •Maximum Extension With Standard Bellows: 18"
- •Minimum Extension: 1.5"
- •Standard Rail: 12"
- •Weight: 13 lbs.

21-2201 .... $6390.00

SINAR p2 5x7 View Camera

The SINAR p2 5x7 comes complete with the SINAR p2 front and rear standards, 12" basic rail, 5x7 tapered bellows, 5x7 metering back and plate holder.

- •Maximum Extension With Standard Bellows: 18"
- •Minimum Extension: 1.5"
- •Standard Rail: 12"
- •Weight: 15 lbs.

21-2202 .... $7590.00
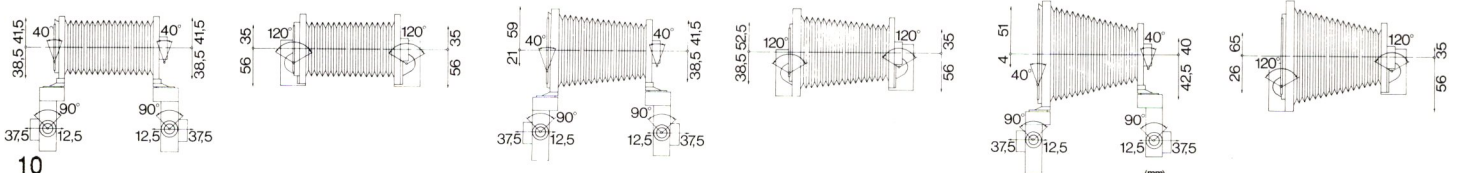
Special T- shaped standard
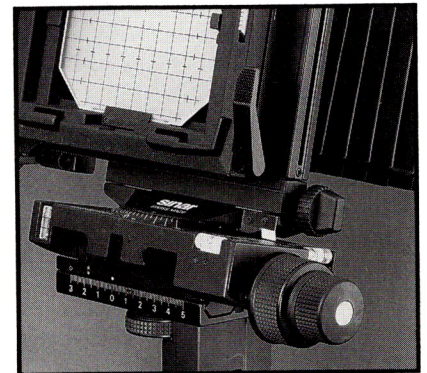
Asymmetric Tilts and Swings

SINAR p2 8x10 View Camera

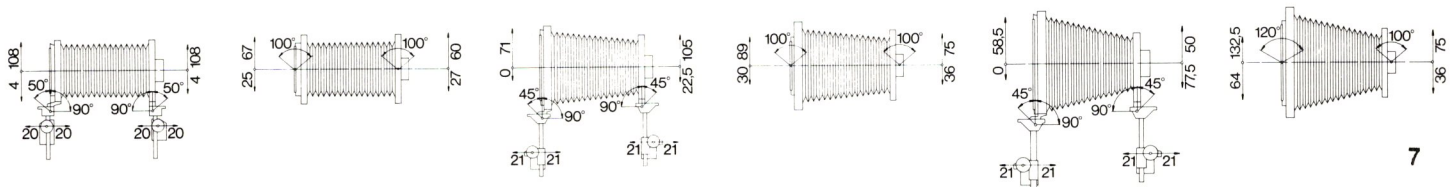Comes equipped with special 8x10 front and rear standard bearers, 12" basic rail, tapered bellows, metering back, ground glass and plateholder for 8x10.

- •Maximum Extension
  With Standard Bellows: 28"
- •Minimum Extension: 2"
- •Standard Rail: 12"
- •Weight: 18 lbs.

21-2203 .... **$8990.00**

Lenses &
Lensboards
See pages 30-34

sinar p2 8x10

23-2209
23-2206
23-1916
23-1919
23-3008
21-2203
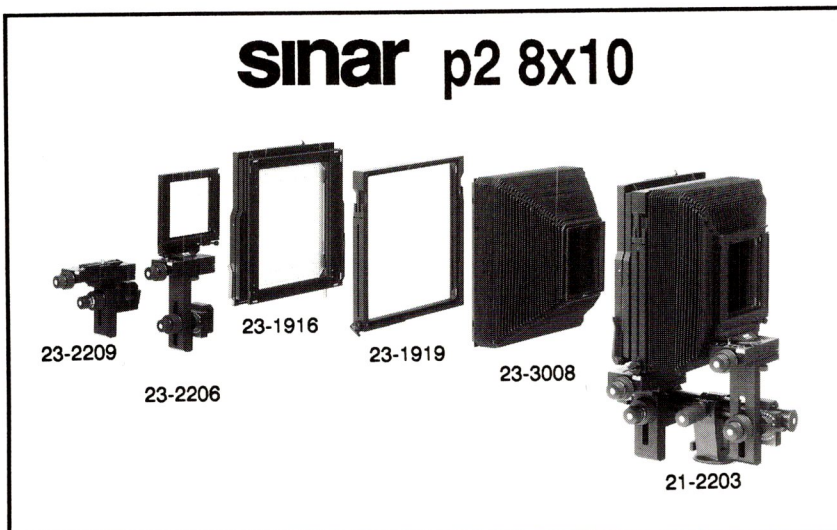
If you are looking for a complete package that includes not only the camera but a shutter, lenses, wide angle bellows and more, this is the kit for you.

The SINAR Pro Kit offers the professional photographer a complete ready-to-go system in one small case. If this is your first move into large format or even if it is an additional camera for an already busy studio, this outfit offers virtually everything you need.

The lenses offered with this kit are the **sinaron** lens series. These lenses have quickly become known worldwide for their superior quality and performance in view camera optics.

Pro Kit Accessories

- 18" Extension Rail (8x10)
- 6" Extension Rail (4x5)
- Auto Aperture Shutter
- Wide Angle Bellows (format)
- Fresnel Lens (format)
- Reducing Bushing
- Camera/Accessory Case (4x5)
- Expert Case (8x10)
- 1 or 2 Lenses (format)
- For 4x5: 210mm f/5.6 **sinaron**
  90mm f/6.8 **sinaron**
- For 8x10: 300mm f/5.6 **sinaron**

SINAR p2 Pro Kit 4x5
Equipped with a SINAR p2 4x5 view camera and all Pro Kit accessories plus a **sinaron-n** DB 210mm f/5.6 lens, and a **sinaron-w** DB 90mm f/6.8 lens.
21-5003 .... **$10695.00**

SINAR p2 Pro Kit 8x10
Equipped with a SINAR p2 8x10 view camera and all Pro Kit accessories plus a **sinaron-n** DB 300mm f/5.6 lens.
21-5005 .... **$13830.00**
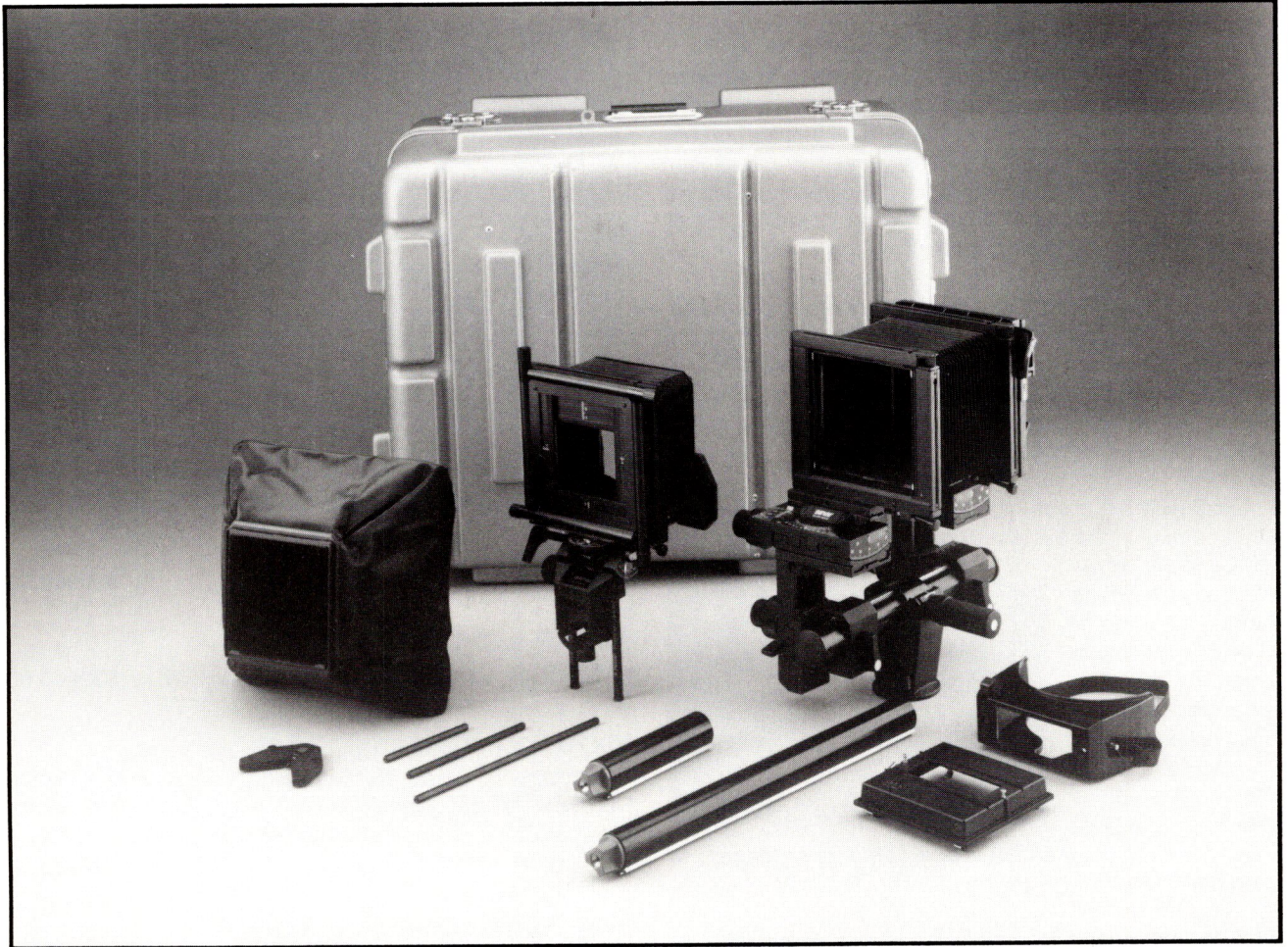
For the discriminating photographer SINAR offers the Expert Kits. Both these kits feature the state-of-the-art SINAR p2 camera.

The Expert Kit features a large array of SINAR accessories to complement the p2 camera. The kit is set up for the studio photographer who wants the very best in equipment at his fingertips.

Even if you have to go on the road, this case is ready when you are. Four removable casters allow you to roll the case easily through airports or on location, and it's durable enough to be checked as airline baggage.

SINAR
Expert Kit Accessories

- SINAR p2 camera (Format)
- 6" Extension Rail
- 18" Extension Rail
- Multipurpose Standard I
- 4x5 Square Bellows
- Wide Angle Bellows (Format)
- Bellows Holders (2)
- Bellows Hood Mask II
- Fresnel (Selected Format)
- Filter Holder Rod Set (3)
- Binocular Magnifier Board
- Lighthood w/ lightdrop
- Expert Case

SINAR p2 4x5 Expert Kit
Equipped with a SINAR p2 4x5 view camera and all Expert accessories.
21-6201 .... **$9225.00**

SINAR p2 5x7 Expert Kit
Equipped with a SINAR p2 5x7 view camera and all Expert accessories.
21-6202 .... **$10475.00**

SINAR p2 8x10 Expert Kit
Equipped with a SINAR p2 8x10 view camera and all Expert accessories.
21-6203 .... **$12150.00**

SINAR e
The Third Dimension Camera

After 150 years of photography, controlling sharpness distribution with the traditional camera movements still tends to be a hit-or-miss affair whenever a complex subject setup extends in depth. You really need an intelligent camera that knows and can link all the photographic equations involved. That would then provide optimum settings for all setups. The SINAR e camera realizes this dream.

The aim is to make the ground glass screen image match the picture or the layout envisioned. You need the best camera settings and the largest possible working aperture: First you select the camera viewpoint and lens, then coarsely preset the rear standard (image standard) for the required sharp zone and perspective.

Next, with the probe, you enter the cluster of selected object points in the system. The computer works out the ideal sharpness distribution - the wedge representing three-dimensional depth of field - and the monitor indicates the camera adjustments needed to relocate the image plane to the best position. Finally, you adjust the rack drives of the lens standard to zero the scale settings on the monitor. That's it!
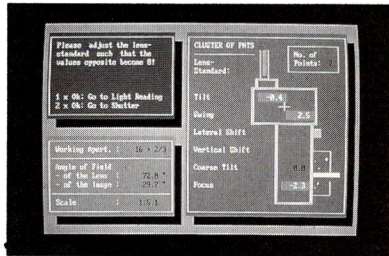
If you later want to modify the image perspective or image scale, simply adjust the rear standard accordingly. The monitor then immediately indicates the required lens standard adjustments to optimize the depth of field wedge.

The quality of the final printed image depends a lot on correct exposure and brightness range. For best reproduction in print, the image brightness range measured in the film plane should not exceed 4 f-stops. Where this range is greater, the lithographer has to compress image information - which in turn leads to unsatisfactory printing quality.

The SINAR e is therefore equipped with exposure metering software. With that you can take single-point, multi-point contrast and reference readings - and do so in single flash, multiple flash, ambient light and mixed light. A step wedge display shows the brightness range measured. Current film type data is stored in the system which automatically also allows for the film's reciprocity failure characteristics.

With the SINAR e, setting up takes less time. When you shoot, you can be sure that the camera records with maximum definition and resolution every point entered. Exposure and image contrast are straightforward known quantities - so you don't have to hold a studio set until you
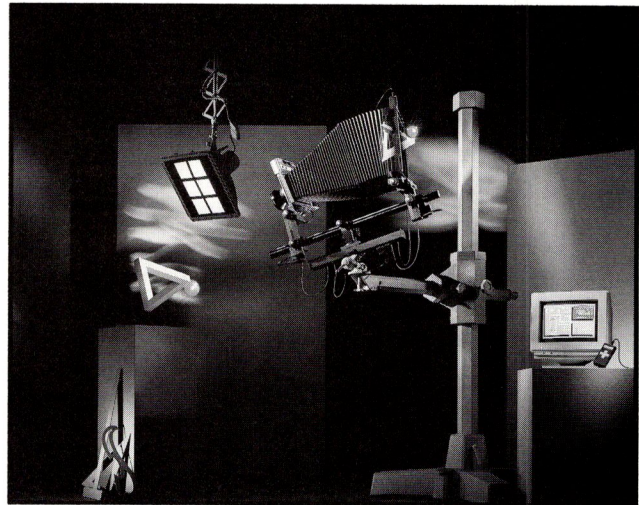
SINAR e 4x5
21-9002 .... **$28900.00**

SINAR e 8x10
21-9004 .... **$32900.00**

8x10 Format Changing Set
Upgrade your 4x5 e to 8x10 in a matter of seconds. Includes 8x10 SINAR e Metering Back (23-1922), 8x10 Rear Carrier Frame (23-1919) and 8x10 MB Tapered Bellows (23-3008).
23-1904 .... **$9900.00**

4x5 Format Changing Set
Allows you to change your 8x10 e camera to 4x5. Includes 4x5 SINAR e Metering Back (23-1920), 4x5 Rear Carrier Frame (23-2017) and 4x5 Square Bellows (23-3004).
23-1903 .... **$7900.00**

Rail Clamp e
If for reasons of stability (long camera extensions) 2 rail clamps have to be mounted between the standards, the rail clamp e must be used; a standard rail clamp would interrupt the metering distance.
23-1002 .... **$1190.00**

can view the finished transparencies on the light box. The SINAR e saves time and materials, and needs less flash power. Even with an average of two to three view camera assignments a week, the SINAR e pays its way with greater productivity.

The Sinar e is fully part of the famous modular SINAR system. Hence your SINAR e is compatible with whatever system components you already own - lenses, behind-the-lens shutters, bellows etc.

Rail Clamp

We recommend the use of an additional Rail Clamp and Base Plate (23-1003) with cameras that either have very long bellows extensions or for added support when you are using an 8x10 camera.

23-1001 .... **$205.00**

Rail Clamp 2

Features a dovetail fitting for the new Base Plate 2, and an extra clamping lever to secure the camera's base rail.

23-1019 .... **$590.00**

Base Plate

For attaching two rail clamps to a SINAR camera for extra support. This accessory is especially useful for long bellows extensions or for added support for any 8x10 camera.

23-1003 .... **$239.00**
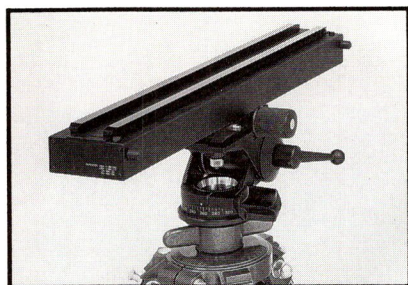
Base Plate 2

Accepts dovetail mounting of the new Rail Clamp 2, and allows rail clamps to move freely over the entire length of the plate.

23-1016 .... **$795.00**

Clamping Adapter
Rail Clamp 1 to Base Plate 2

23-1017 .... **$174.00**

Pan Tilt Head

The SINAR Pan Tilt Head is designed to maintain the convenient right-hand operation of SINAR cameras. Its compact design makes it more stable than other heads, and its long lever handle is easier to tighten and loosen than traditional twist locks. The camera plate is keyed to SINAR rail clamps for quick camera attachment, and the 360° panoramic base is calibrated for precise positioning.

23-6010 .... **$557.00**
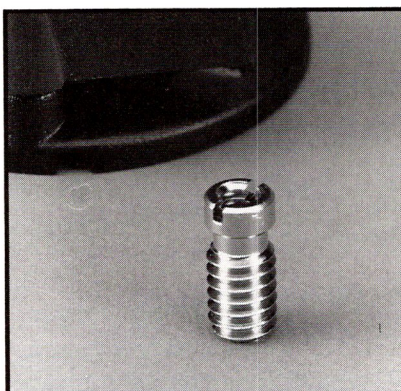
Reducing Bushing
3/8" to 1/4"

Unlike all other reducing bushings on the market, the SINAR reducing bushing is designed to be installed in the rail clamp from the top down, not from the bottom up. This allows greater security in using the 1/4" thread.

23-6006 .... **$16.00**

Quick-Release Adapter

To attach any Rail Clamp or Base Plate to a Pan-Tilt Head or tripod.

23-1018 .... **$140.00**

Clamping Stand Set

The clamping stand set consists of both the clamp unit and the camera holder. This unit allows you to mount either your SINAR camera or any other camera with a 3/8" tripod mount onto window frames, railings, ladders, etc.

23-6013 .... **$654.00**

Clamp Unit

Part of the clamping stand set, this unit will attach to railings ladders, etc. out in the field when a tripod is impractical to use. If used with a SINAR camera, it requires the use of an extension rail.

23-6014 .... **$329.00**

Camera Holder

Part of the Clamping stand set, the holder attaches to a SINAR rail and has a 3/8" screw on which to mount cameras.

23-6015 .... **$329.00**

Screw Adapter Set

To adapt most camera screws and threads to each other.

23-6003 .... **$235.00**

Screw Adapter

With 3/8" screw for directly mounting a camera on the clamp unit (23-6014).

23-6007 .... **$47.00**

Camera Screw w/ 3/8" & 1/4"

Replacement screw for the SINAR pan tilt head.

23-6005 .... **$35.00**

Camera Support Platform
for p2 Standard

Attaches to the top of the rear p standard so that a 35mm camera may be attached to permit micrometer-adjusted movements.

23-6008 .... **$138.00**

Universal Camera Holder

Attaches a 35mm camera to the Rail Clamp.

23-6009 .... **$138.00**

Extension Rails

SINAR extension rails provide your camera with virtually unlimited extension capability. Rails are available in 6, 12 and 18 inch extensions for use with a variety of lens sizes. For extra stability when shooting 8x10, consider the rock-solid 36 inch base rail.

Extension rails are simply screwed onto either end of a basic rail. An unlimited number of rails can be combined.
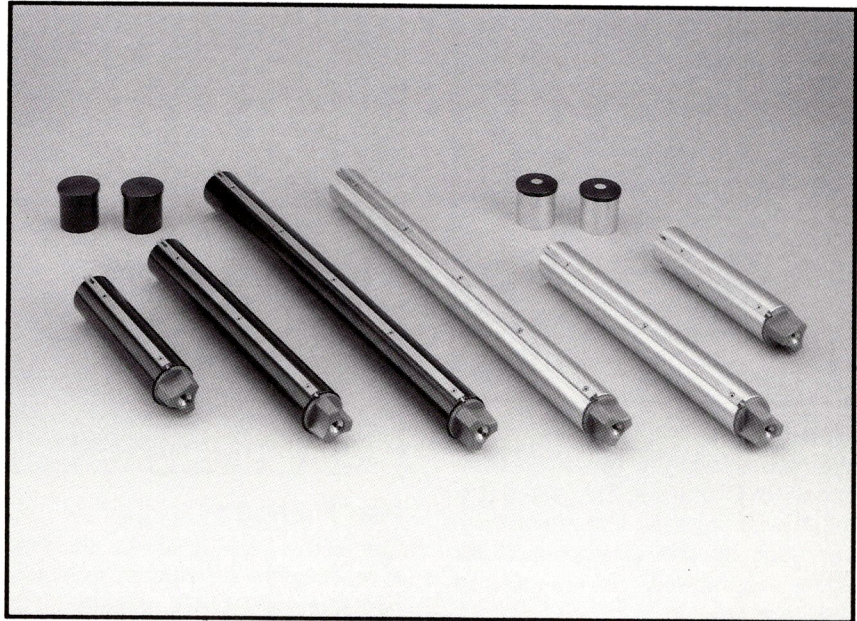
Length	Type	Color	Product #	Price
6"	Extension	Black	23-1207	136.00
6"	Extension	Chrome	23-1007	126.00
12"	Extension	Black	23-1209	164.00
12"	Extension	Chrome	23-1009	154.00
12"	Basic	Black	23-1208	136.00
12"	Basic	Chrome	23-1008	126.00
18"	Extension	Black	23-1206	235.00
18"	Extension	Chrome	23-1006	215.00
36"	Basic	Black	23-1210	579.00

Rail Cap
Replacement cap for the camera. This cap prevents unlocked standards from sliding off the rail.
Black
23-1204 .... $34.00
Chrome
23-1004 .... $31.00

Rail Cap Special
Prevents unlocked standards from sliding off an extension rail used without a base rail.
23-1005 .... $19.00

Call

1-(800) 456-0203

For orders, information and technical support

When we first began to use Sinar, I took a complex room set and did all the swings and tilts in 23 seconds. And it was accurate enough to let me shoot at f/22, instead of the old f/45 when everything was more crudely done.

I had projected that our Sinar Bron equipment would pay for itself in five years. We're coming up on four now, and it has already truly paid for itself.
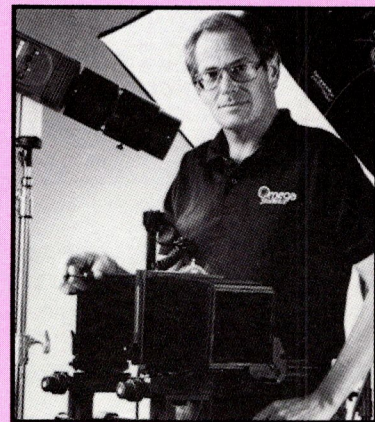
—John Carroll
Omega Studios
Dallas, TX
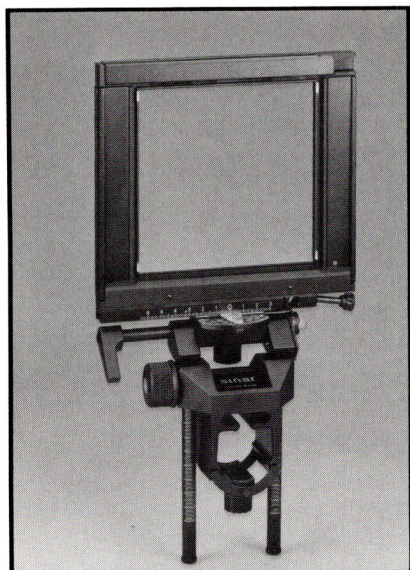
Front Standard f1
Also called the multipurpose standard, you can use this standard for a variety of applications. As a compendium lens shade it offers unparalleled versatility in adjustments. As an intermediate bellows support this standard will allow the use of an additional set of extension bellows for close up photography.
23-2210 .... **$605.00**

Rear Standard f1 4x5
The rear standard for the f1 4x5 camera features full parallel shifts, swings and tilts, angle scale dial and depth of field scale.
23-2211 .... **$850.00**

New!

Rear Standard f2 4x5
In addition to all the features of the f1 rear standard, the f2 standard has separate swing and shift controls for more convenient handling.
23-2213 .... **$892.00**

Front Standard f2 4x5
The f2 front standard differs from the f1 standard in several ways. The f2 standard offers a fine focusing knob for critical work, and the rail clamp on this unit is enclosed, providing additional support for heavier lenses.

In addition, the swing and shift locks on the f2 front standard are independent of each other for more convenient operation.
23-2212 .... **$793.00**
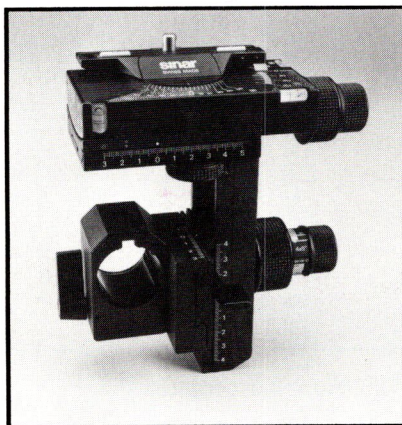
Rear Standard 4x5 p2
The SINAR p2 rear standard's features include asymmetric tilt and swing, a full range of parallel shifts, depth-of-field scale, angle calculator scales, anodized black finish and much more. This standard is used to upgrade the SINAR f camera into a c camera. It requires the use of a rear carrier frame (23-2017) to attach the bellows and plateholder.
23-2208 .... **$2836.00**

Front Standard 4x5 p2
The front standard of the SINAR p2 camera offers you the ultimate in image control. It allows extremely fine, micrometer-driven adjustments. This standard, like all others, offers a full range of movements. It may be added to the c camera to turn it into a p camera.
23-2204 .... **$3100.00**

Multipurpose Standard 5x7
When shooting with an 8x10 camera that requires long extensions, you have to be careful of bellows cutoff. By using the 5x7 multi-purpose standard, a 5x7 standard bellow and an 8x10 to 5x7 special bellow this problem is virtually eliminated.
23-2200 .... **$1024.00**

Front Standard f2/c2 8x10
This special front standard offers larger rise and fall posts for greater stability along with a greater shift range. This standard is recommended for use with 5x7 or 8x10 formats.
23-2202 .... **$2047.00**
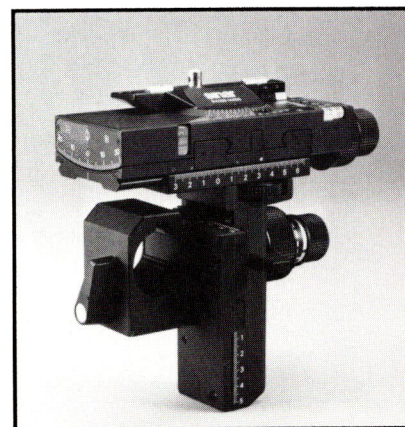
Rear Standard 8x10 p2
The SINAR p2 8x10 standard differs from the normal p2 standard in several ways. First, the standard is T-shaped to provide greater stability and shift range. The standard also offers additional rise for the 8x10 back. If you are shooting 8x10 this standard is a must.
23-2209 .... **$3449.00**

Front Standard 8x10 p2
The SINAR p2 8x10 front standard offers greater rise and fall than the normal standard and is set up with detents at the 8x10 zero position.
23-2206 .... **$3623.00**
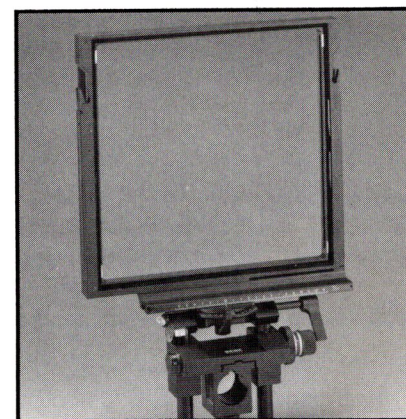
Rear Standard f1/f2 8x10
The SINAR f1/f2 8x10 rear standard offers an extended range of shifts for the 8x10 format. It is spring loaded so that both the rise and fall movement may be adjusted effortlessly. The support posts are thicker and are set into a special base for added support.
23-2201 .... **$2171.00**

17
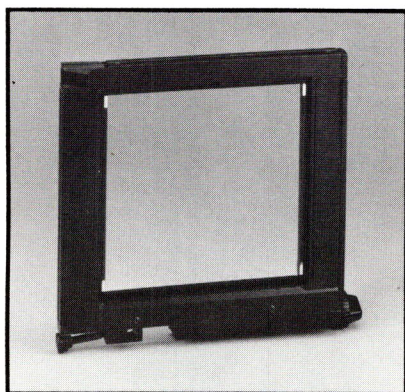
4x5 Rear Carrier Frame
Used in conjunction with the c2/p2 rear standard. The coupling frame allows both the bellows and the film holder to be attached to the standard.
23-2017 .... $360.00

4x5 Glass and Holder Carrier
This basic back is standard on the f1 camera and comes with lifting levers but without the metering frame. Consists of 4x5 Screen frame II (23-2024) and 4x5 Holder frame (23-2023).
23-2027 .... $395.00
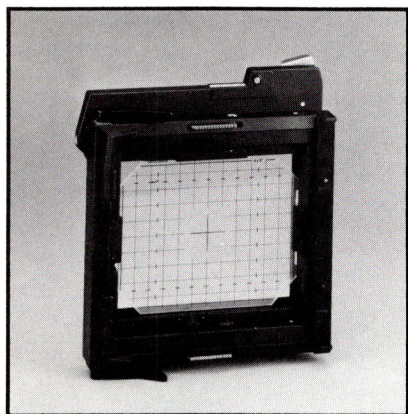
Metering Back (MB) 4x5
Can be mounted on most SINAR cameras and allows easy installation of a metering probe (see page 25) for film plane spot reading. When used with a lightmeter holder, your light meter and probe are always available. Consists of 4x5 Screen Frame II (23-2024), and the 4x5 metering frame (23-2025).
22-1022 .... $724.00

4x5 Metering Holder Frame
Replaces non-metering frame to create a metering back.
23-2025 .... $465.00
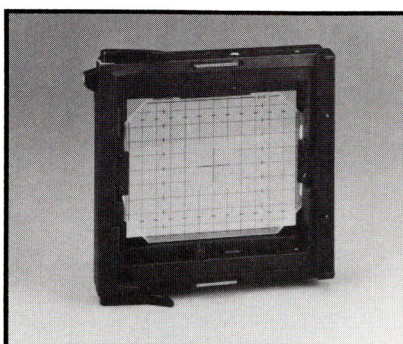
4x5 Screen Frame II with Lifting Levers
The Screen Frame II allows you to upgrade an existing back without lifting levers to one that has lifting levers. This unit connects to either the metering frame (23-2025) or the non-metering holder frame (23-2023).
23-2024 .... $259.00

4x5 Holder Frame/non-metering
Part of the 4x5 non-metering back.
23-2023 .... $136.00

5x7 Rear Carrier Frame
When you upgrade you SINAR p2 camera into a 5x7 the rear carrier frame is required to attach both the bellows and the 5x7 MB glass and holder carrier.
23-2018 .... $756.00
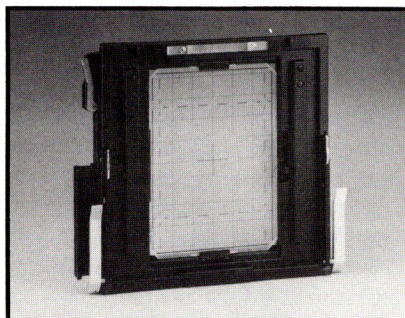
5x7 MB Glass and Holder Carrier
The 5x7 Glass and Holder Carrier features not only the meter back for convenient spot metering, but also a fluid dampened hydraulic back for ease of inserting and removing film holders.
23-2115 .... $1225.00
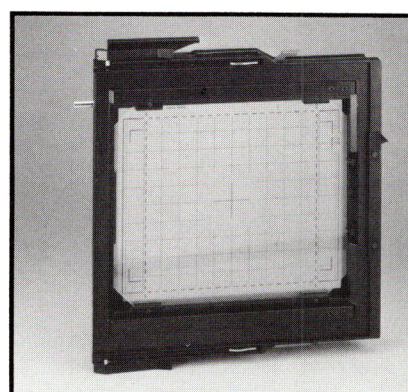
8x10 MB Metering Back
The 8x10 metering back is used on all current SINAR 8x10 view cameras. Unique features include a fluid-dampened hydraulic system to cushion closing of the back. Another patented feature is the metering back, which will allow film plane spot meter readings with the SINAR Booster 1, Sinarsix Digital or Broncolor FCM probe anywhere in the image area.
23-1916 .... $1817.00

8x10 MB Rear Carrier Frame
Used to support both the 8x10 metering back along with the 8x10 MB bellows.
23-1919 .... $1121.00
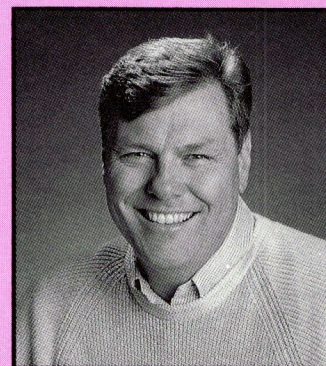
The equipment is the best and the support given by the guys at Sinar Bron makes it even better. I can't even think of going back to working with anything else.

—*Jim Hansen*
Santa Ana, CA

Bellows

The SINAR system features ten different bellows for every application. Virtually all of them can be employed as lens shades or groundglass viewing screens.

The **4x5 square bellows** is standard with all SINAR 4x5 cameras. In addition, this versatile bellows can also be used with Multipurpose standards to increase camera extension for all formats.

The **4x5 Wide Angle Bellows** is used with shorter lenses. This "Bag Bellows" lets you use full camera movements at short extensions.

To focus with lenses 65mm or shorter, you'll need the **Extra Wide Angle Bellows.** Its thin-frame, double-bag design allows you to move the camera standards to within 1/4 inch of each other.
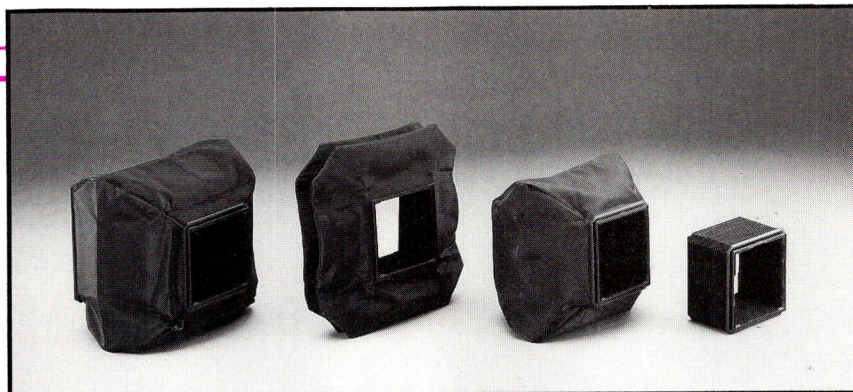
The **5x7 Tapered Bellows** is standard on all 5x7 cameras, and connects a 5x7 back to a 4x5 front standard. It can also be combined with a 5x7 Multipurpose Standard and an **8x10 to 5x7 Special Bellows** for extra-long extensions on an 8x10 without vignetting problems.

The **8x10 Tapered Bellows** is available in two varieties to fit current production meter-back (MB) cameras and the older, non metering frames (Non-MB). The **8x10 Wide Angle Bellows** is also available in MB and Non-MB versions.

Size	Type	Product#	Max. Ext.	Use with Lenses	Comments	Price
4x5	Square	23-3004	18"		Standard & multipurpose bellow	$225.00
4x5	Wide Angle	23-3007	-	75-135mm		$225.00
4x5	Extra Wide	23-3014	-	45- 65mm	For 65mm and shorter lenses	$360.00
5x7	Tapered	23-3001	25"		5x7 to 4x5	$374.00
5x7	Wide Angle	23-3005	-	90-165mm	5x7 to 4x5	$321.00
8x10	Tapered MB	23-3008	23"		8x10MB to 4x5	$722.00
8x10	Special	23-3010	50"*		8x10MB to 5x7 intermediate	$1180.00
8x10	Wide Angle	23-3011	-	120-240mm	8x10MB to 4x5	$599.00
8x10	Tapered Non-MB	23-3002	25"		For older non-MB 8x10's	$662.00
8x10	Wide Angle	23-3006	-	120-240mm	For older non-MB 8x10's	$599.00

NOTE:
(MB) Metering Back - Fits newer style 8x10 metering back camera with rear frame size 12 1/8" x 12 1/8".
NON Metering Back - Fits older style non-metering back type camera with rear frame size 10 3/4" x 10 3/4".
* Special bellows used with 5x7 tapered bellows and 5x7 Multipurpose standard to prevent vignetting with extensions over 35".

Filter Rod 4 1/4"
23-1012 .... $18.00

Filter Rod 6 1/4"
23-1011 .... $19.00

Filter Rod 10"
23-1010 .... $25.00
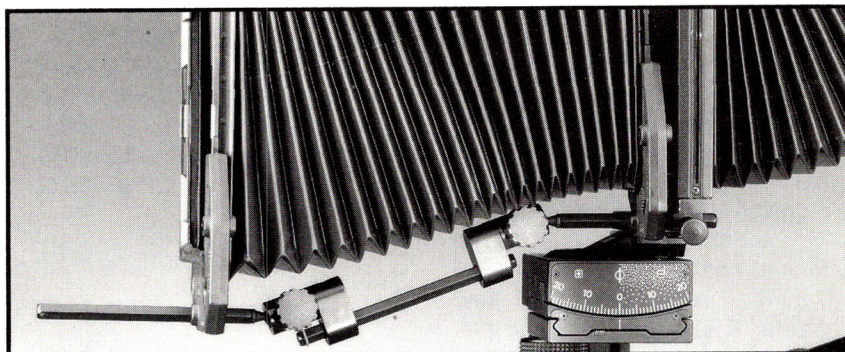
Bellows Holder
Lets you attach the bellows to either the filter rods or joint rod for use as a lens shade.
23-1013 .... $24.00

Joint Rod
Two-point swivel rod for attaching a compendium hood to the front of the camera as a lens shade or a bellows to the back as a focusing hood.
23-1015 .... $180.00

Special Effects Accessories
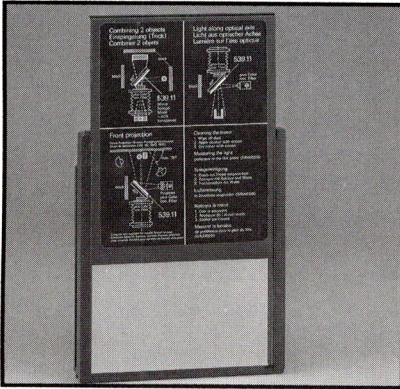
5x5" Semi Reflecting Mirror with Housing
Attaches to the front of a Multipurpose standard, this mirror can "see" two sets at once, making it a useful special effects tool for the studio photographer.
23-4005 .... **$495.00**
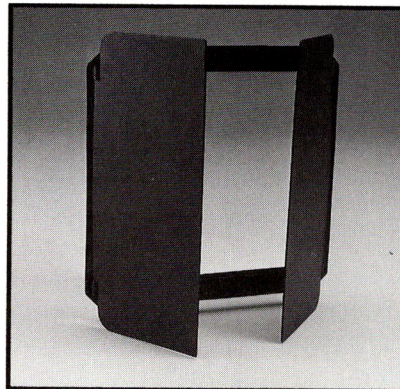
Bellows Hood Mask I
Attaches to either a Multipurpose standard or a bellows holder for use as a lens shade or mask to block off part of the image from being exposed.
23-4015 .... **$95.00**
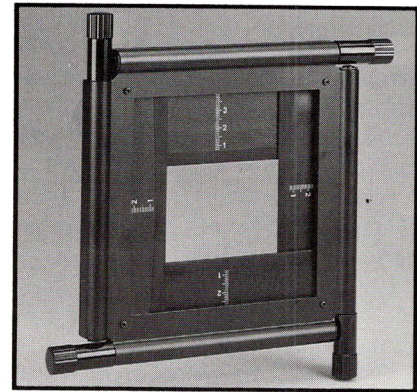
Bellows Hood Mask II
Attaches to Multipurpose Standard I. Has micrometer fine drives on four shutter curtains for precise adjustment of the hood for special effects photography.
23-4025 .... **$795.00**

Format Changing Sets
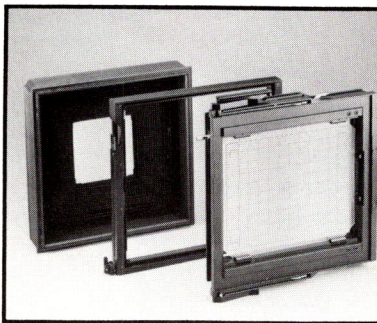
8x10 MB Format Changing Set
Now you can convert your p2 4x5 camera into an 8x10 quickly and easily. Simply remove the 4x5 format bellows from the front standard, loosen one screw, place the 8x10 format changing kit in its place, retighten the screw, attach the bellows and you're shooting 8x10! The format changing kit consists of Tapered Bellows (23-3008), Rear Carrier Frame (23-1919) and Metering Back (23-1916).
23-1902 .... **$2995.00**
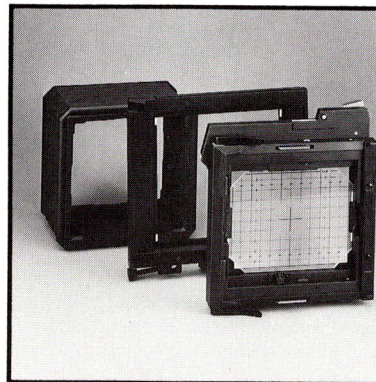
4x5 Format Changing Set
To convert 8x10 into a 4x5 camera. Consists of Standard Bellows (23-3004), Metering Back (22-1022), and Rear Carrier Frame (23-2017).
23-2003 .... **$1195.00**

5x7 MB Format Changing Set
Consists of Tapered Bellows (23-3001), 5x7 Rear Carrier Frame (23-2018) and 5x7 Metering Back (23-2115.)
23-1901 .... **$2190.00**

Reducing Backs
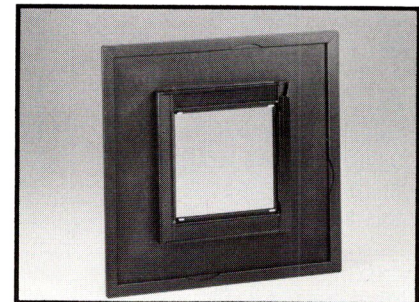
8x10 MB to 4x5 Reducing Adapter
Use a Reducing Adapter to shoot a quick 4x5 test print in place of a costlier 8x10 test. No refocusing is required.
23-1917 .... **$964.00**

5x7 to 4x5 Reducing Adapter
23-7003 .... **$599.00**

NOTE: All reducing adapters require use of a 4x5 Glass and Holder Carrier (23-2027), or Metering Back (22-1020).

Why You Need a Sinar Bellows Hood Mask

How many times have you seen one of your fellow photographers shading a lens with a dark slide, hand held and wavering like a weak tree in a strong breeze?

If you consider that swings and tilts can admit light rays along an axis different from the lens elements themselves, then the need for critical shading is even more important than on cameras with fixed optical paths.

With two complementary shades from Sinar, you can put all the improvising behind you once and for all, and as an added bonus get some unexpected shooting capabilities.

Sophisticated Shading

The first of these, called the **Bellows Hood Mask I,** couples a standard Sinar bellows frame to a set of barndoors and some clever restraining clips that will be explained shortly. In its simplest application, you attach the mask to your front standard via a filter rod and bellows holder. Now you've got a set of adjustable barndoors that you can place anywhere in front of the lens.

A more effective arrangement comes from mounting a second front standard to the camera rail and adding a bellows. Now you have a fully adjustable bellows shade that can rise and fall as needed to handle movements, plus a set of barndoors that also adjust.

Now let's get to those clips we
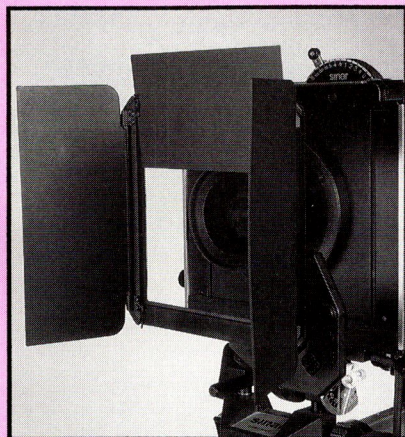
Bellows Hood Mask I can be used as shown without a bellows. This is an excellent way to shade wide-angle lenses from stray light.

mentioned. The Bellows Hood Mask I comes supplied with two opaque panels of the same material as the barndoors. These slide up and down into the image path and are held secure with spring clips. Using these together with the barndoors, you can shade down any scene so that only the ground glass image gets through—all extraneous rays will be blocked.

Creative opportunities open up when you replace the opaque panels supplied by Sinar with your own devices. For example, a thin sheet of board, painted black and cut with a sawtooth edge, makes a perfect vignetter that is easy to adjust and stays put. Or how about colored gels, or translucent shades?
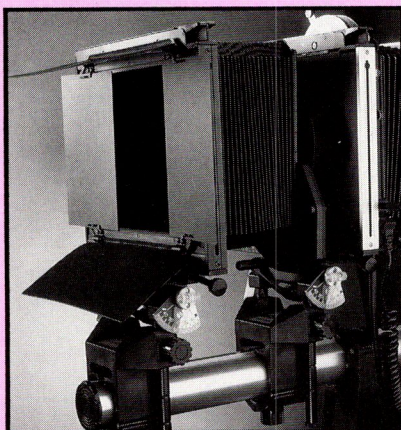
Bellows Hood Mask I shown with bellows and second front standard. Barndoors and movable slats can provide utmost control over light that reaches the lens.

Special Effects Made Easy

The **Bellows Hood Mask II** performs the same functions but adds capabilities for special effects based on multiple exposures. It is normally used with a second front standard and a bellows. Instead of barndoors and adjustable slats, the Bellows Hood Mask II provides four roller curtains on precise micrometer drives. Each curtain can close off the entire bellows opening if so desired.

When used as a shade, the "II" is the ultimate in convenience. After composing an image, the lens is stopped down, and the micrometer drives turned
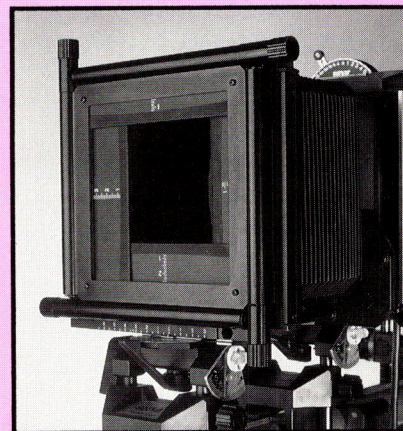
Bellows Hood Mask II features precise roller blinds that can set optimum shading within seconds or open small windows within a scene for multiple exposures.

in sequence until the edge of its corresponding roller shade is just visible. Then back off slightly to avoid vignetting.

But most studio shooters will have more ambitious goals in mind for the Bellows Hood Mask II. The roller blinds are so accurate — and repeatable — that bothersome special effects become routine. For example, take the old photographer's trick of photographing a person standing next to himself. We know the way to do this is to mask off the left and right halves of an image in sequence, and then expose the same person on the left and then the right. Such trick shots seldom look convincing because it is so hard to get the left and right side masks to line up just right. The roller blinds are so precise that it's possible to get seamless background tonalities and utterly convincing special effects.

Another special effect consists of opening small "windows" across the image field, into which you put image elements. Also simple are perfect vignettes and color blends. The truth is that the Bellows Hood Mask II takes a certain amount of experimentation, because its capabilities are so great. This is the kind of research that any pro will tackle with pleasure, because he knows that exciting pictures will be the end result.

Ground Glass

Viewing Accessories

4x5 Ground Glass
With 1cm grid and calibration lines for asymmetric movements.
23-4007 .... $45.00

5x7 Ground Glass
As above, with image size markings for standard and metric film sizes.
23-4010 .... $50.00

8x10 MB Ground Glass
For the current line of metering back cameras. With 1 cm grid, calibration lines for asymmetric movements and image size markings in English and metric. Measures 10 $\frac{1}{2}$" x 8 $\frac{7}{8}$".
23-4029 .... $88.00

8x10 Ground Glass (non-MB)
Fits older style non-metering back cameras. Measures 10" x 8 $\frac{1}{4}$"
23-4009 .... $77.00

5x5 Rapid Adapter Ground Glass
23-4008 .... $47.00

Bino Reflex Housing with Loupes
The SINAR Bino Reflex Housing allows you to view the entire groundglass area right side up. The mirror is adjustable to allow you to always have the brightest image on the groundglass especially when used with our fresnel lens. Includes Lighthood (23-4030).
23-4019 .... $599.00

Bino Reflex Housing with 4.25 Corrective Loupe
Same as above but with 4.25 corrective loupes. Requires (23-4030).
23-4024 .... $690.00

Lighthood with Lightdrop
Attaches to either the Bino Reflex Housing or the Bino Board to block out ambient light.
23-4030 .... $145.00

Bino Magnifier Board
Can be used with any bellows attached to the back of the camera to view the ground glass without having to use a dark cloth. Requires Lighthood (23-4030.)
23-4021 .... $179.00

Corrective Loupe
4.25 Diopter.
23-4023 .... $137.00

Fresnel Lenses

4x5 Mounted Fresnel Lens
The SINAR Fresnel Lens can easily be snapped into place over the groundglass. The fresnel gives you a brighter viewing area to judge both camera movements and focusing.
23-2012 .... $160.00

4x5 Mask Fresnel Holder only
1/4" frame for fresnel. Requires Fresnel lens (23-4011).
23-2013 .... $43.00

4x5 Fresnel Lens Only
Replacement fresnel, Requires frame (23-2013).
23-4011 .... $132.00

5x7 Fresnel Lens Only
23-4013 .... $191.00

8x10 MB Fresnel Lens
Fresnel lens for the current line of meter back cameras.
23-4032 .... $311.00

8x10 Fresnel Lens (non-MB)
Fits the older style non-meter back 8x10 cameras.
23-4012 .... $299.00

Mask/Fresnel Holder for Rapid Adapter
23-4003 .... $166.00
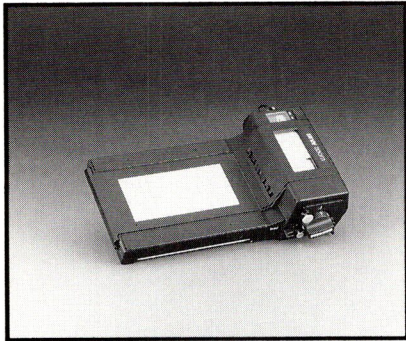
Zoom Multiformat Rollholder for 120/220 film

This all new rollfilm holder allows you to change the format in the middle of a roll. This allows you to use five different formats from 6x4.5cm up to 6x12cm. A special film advance prevents image overlap when changing from a smaller format to a larger one. In addition, the film path of the Zoom holder is designed so that the film does not take any sharp turns before it enters the film gate, thus assuring ultimate film flatness.
Includes Vario Mask (23-7084) and film cartridge (23-7080).
23-7070 .... **$2295.00**

6x12 Panorama Rollholder

For fixed format 6x12cm.
23-7076 .... **$1438.00**

6x9 Format Rollholder

For fixed format 6x9cm.
23-7078 .... **$1323.00**

6x7 Format Rollholder

For fixed format 6x7cm.
23-7077 .... **$1323.00**

Film Cartridge
Replacement.
23-7080 .... **$82.00**

4 Film Cartridge Package
With case
23-7082 .... **$310.00**
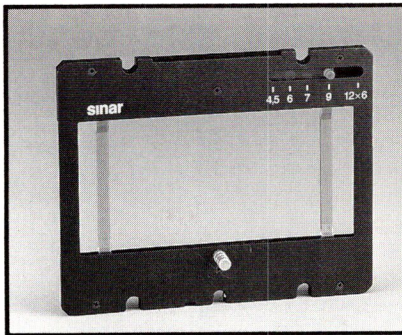
Vario Mask
23-7084 .... **$95.00**

Universal Mask
23-7086 .... **$18.00**

Mask for 6x7 Format
23-7088 .... **$18.00**

Viewing Mask Set
23-4016 .... **$47.00**
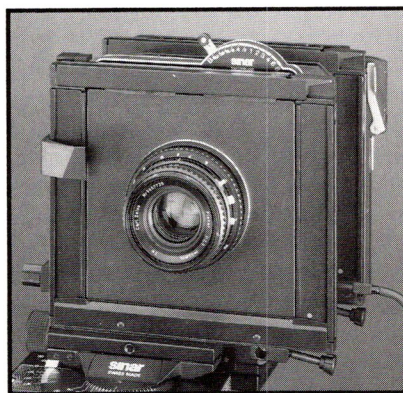
Hasselblad Lens Adapter

With the new Hasselblad Lens Adapter, you can use Hasselblad lenses on your SINAR view camera. Now you can take advantage of the view camera's swings and tilts while still using rollfilm. The adapter also opens up a new range of wide angle lenses for users of rollfilm holders. This board is designed to be used with either the Sinar Auto aperture shutter or the Sinar Digital shutter.
23-7008 .... **$190.00**
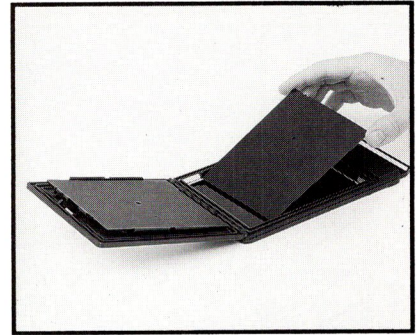
Precision Sheet Film Holder

Until today the weakest link in the precision of the view camera has been the sheet film holder. SINAR has taken a bold new approach to this neglected piece of equipment. When you close the cover of this new film holder a two- stage pressure plate is engaged. Instead of floating in the holder, the film is firmly held in place to within a tolerance of +/- 0.03mm. The emulsion is always in the same place, no matter what the thickness of the film base.

Three cutouts along the edges of the film holder allow the imprinting of copyright notices with a litho film insert. Adjustable dials can also imprint two digits along the edge of the frame. Indicators show whether or not the holder is loaded and whether the film has been exposed.

Finally, there is a sheet film holder made to meet the tolerances of today's precision cameras and optics.
23-7065 .... **$450.00**
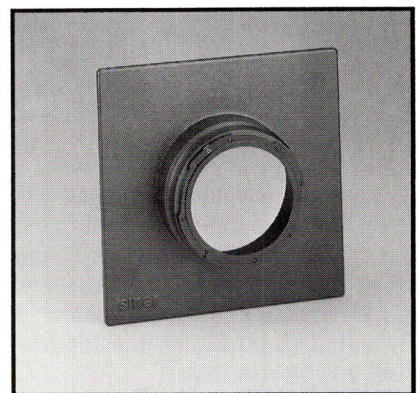
Hasselblad Adapter Board

Allows you to mount your Hasselblad camera on the back of a SINAR so that you may take advantage of view camera movements.
23-7007 .... **$456.00**

Note: All SINAR rollfilm holders are inserted into the camera back like a regular film holder. Each film holder comes complete with film cartridge and format corresponding viewing mask. Spare film cartridges make film changing fast and light safe.
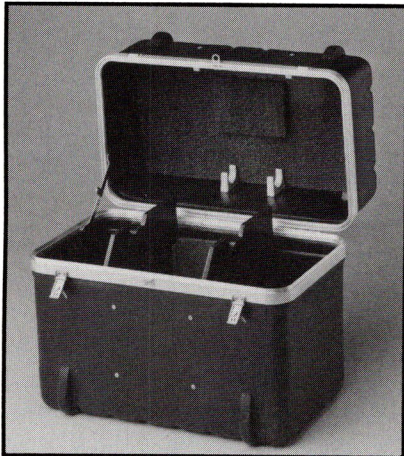
SINAR Camera or Accessory Case

This case is constructed of high density polyethylene. It is designed to be top loaded with the camera supported by the rail. Solid birch dividers keep the camera firmly in place, while all interior surfaces are covered with an Etha-foam. Outside dimensions are 20" L x 11" W x 18" D. Weight 5 lbs.

23-5021 .... **$345.00**

SINAR f1 & f2 Image Case

Designed to hold either the f1 or the f2 camera in a custom Etha-foam insert. In addition, the attache styled Image Case has room to store two lenses, two extension rails, six film holders, a Polaroid 545 holder, wide angle bellows and bellows clips.

The exterior has a light weight aluminum closure, and a padded handle with suitcase-style latches. The locks are designed to prevent the case from being opened upside down. Outside dimensions are 21"L x 13" W x 8" D. Weight 2.5 lbs.

23-5026 .... **$174.00**
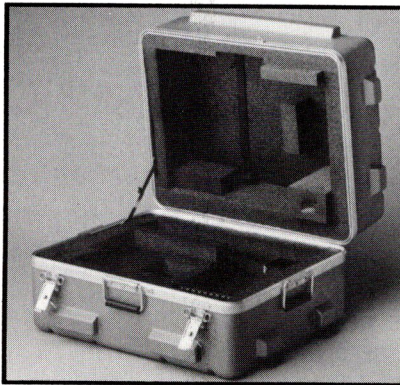
Expert Case, Heavy Duty

The SINAR Expert case is designed to hold either a 4x5 or 8x10 SINAR camera along with a full load of accessories. This case is manufactured from high density polyethylene that resists temperature changes, and has a shock absorbing rib design. The Etha-foam interior construction is custom die cut to hold your camera safely. A set of velcro straps further secures your camera for safe transportation.

The case has a continuous piano hinge for extra durability, with heavy duty military latches to assure that it won't come open in transit. Recessed, spring loaded padded handles are located both on the front and top of the case. It also features 3" hard rubber casters so that the case can be rolled along when loaded. Outside dimensions measure 25" L x 19" W x 15" D. Weight 9.5 lbs.

23-5023 .... **$599.00**
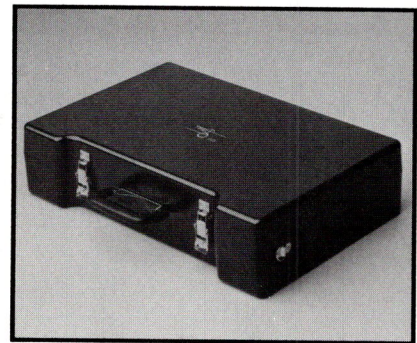
Digital Shutter Case

This compact and rugged case is designed to transport your Digital shutter, Module II, Sinarsix digital, Rapid Battery charger, and batteries in a convenient attache styled case. Outside dimensions are 20" L x 12" W x 5" D. Weight 3 lbs.

23-5011 .... **$230.00**
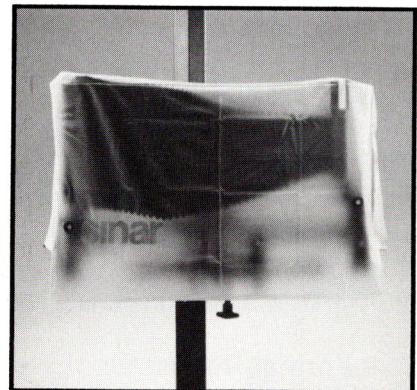
Dust Cover, Large

Keep your camera dust-free when not in use. At the end of the day just cover it with this heavy vinyl dust cover.

23-5034 .... **$53.00**

Film Plane Meters
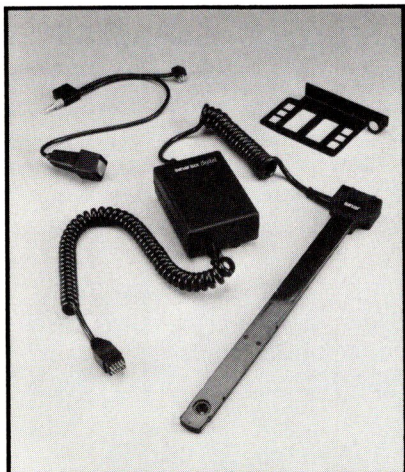
SINARSIX Digital

Exposure meter probe for spot readings on the film plane to be inputted directly into the SINAR Module I or II (pg. 28). This highly sensitive probe can be used with the SINAR metering backs or with Light Meter Cassettes. Includes release cable (22-3031), Lightmeter Holder (23-2026).

22-3030 .... **$1898.00**
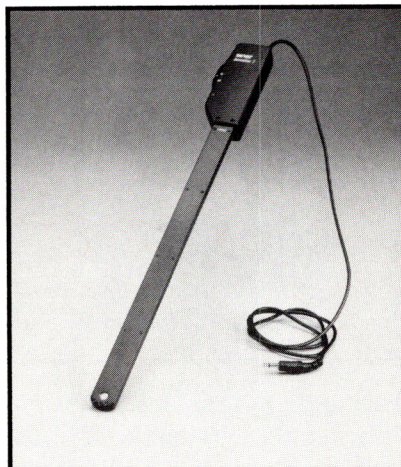
SINAR Booster 1

The Booster 1 is designed to be used on either the Minolta Flashmeter IV or III. This probe is long enough to reach all areas of a 4x5, 5x7 or 8x10 metering back. It has a built in window on the tip of the meter to allow precise spot positioning. It also has two plastic bumpers so it will not damage the ground glass of your camera.

The meter is designed to turn off after 2 1/2 minutes to conserve batteries. The Minolta Flashmeter IV can be attached to the side of a SINAR camera with the use of SINAR Minolta Light Meter Holder (23-2028.) The probe can measure both continuous and strobe light.

22-1025 .... **$966.00**
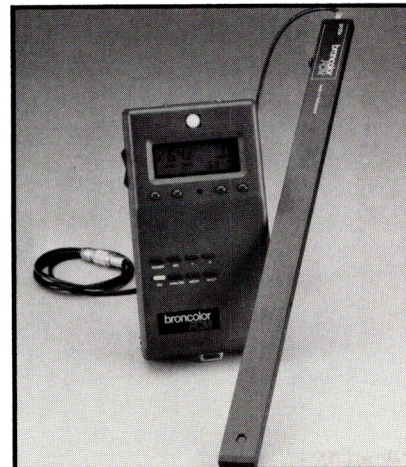
FCM Flashmeter

The Broncolor FCM measures both flash and continuous light in a range from f1 to f180 $^9/_{10}$ in $^1/_{10}$ stop increments, including multiple flash measurement and mean and contrast readings.

With the addition of the FCM probe, the FCM becomes a film plane metering system. In film plane mode, the FCM functions as a nulling meter, reading the number of stops you are away from the correct exposure.

Requires one 9-volt battery (not included.)

16-1010 .... **$799.00**

Probe for FCM Flashmeter

16-1012 .... **$340.00**

Using film plane metering on our Sinars has given us better overall consistency. Measured photography saves us film and allows us to keep some unreal schedules. And controlling the exposures means color separations and printing are a breeze.

—Kevin Youngblood
Webco Printing
Atlanta, GA
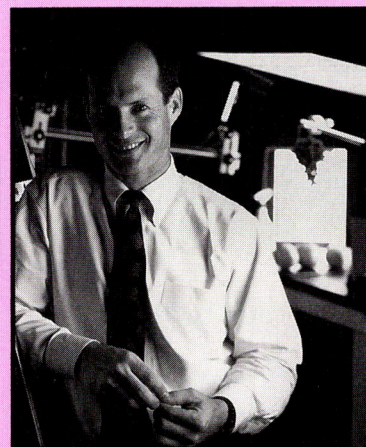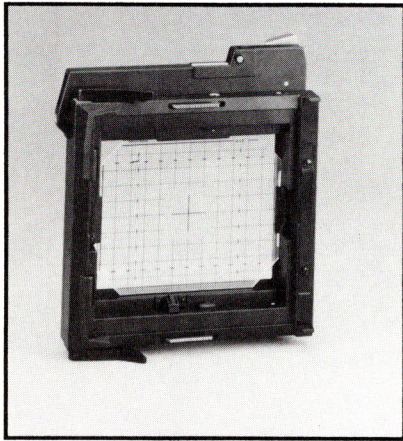
Metering Back 4x5

Either the metering back or the light meter cassette must be used for film plane metering. Standard on the f2, c2 and p2, the metering back can be mounted on most older SINAR 4x5 cameras. When used with a light meter holder, your light meter and probe are always available. This unit is supplied with the Screen Frame II with lifting levers for ease of insertion and removal of film holders.

22-1022 .... **$724.00**

Minolta Light Meter Holder

Designed to attach the Minolta flashmeter IV to the side of a SINAR camera.

23-2028 .... **$61.00**

Light Meter Holder

Attaches to the side of the SINAR rear standard and holds either the Profi Select TTL or SINARSIX Digital.

23-2026 .... **$59.00**

Light Meter Cassette 4x5

The Light Meter Cassette is needed to use film plane meters such as the Booster 1, Sinarsix or Broncolor FCM for film plane metering in non-metering back or non-SINAR cameras.

22-1003 .... **$199.00**

Light Meter Cassette 5x7

Same as the 4x5 Light Meter Cassette but for the 5x7 format.

22-1002 .... **$288.00**

Inter-frame 8x10 to 5x7

Permits the use of film plane metering probes on 8x10 cameras without metering back. It requires the use of a 5x7 Light Meter Cassette (22-1002, not included).

22-1010 .... **$199.00**

Light Meter Holder for Light Meter Cassettes

Fits Light Meter Cassettes 22-1002, 22-1003 and holds the Sinarsix or Profi-Select TTL.

23-2029 .... **$124.00**

Exposure Calculator

Simply place the cap of this pencil into your set, focus the camera, measure the side marked factor and read your bellows factor. If you are working with the depth-of-field scale in the close-up mode the f/stop scale will give you the compensation needed.

23-9020 .... **$18.00**

Buying Sinar is an investment in the very best system in the world. Sinar has built a very career-minded system, where you can start in with the basics and adapt all the way up to an advanced level. But still, incredibly involved equipment is very simple, very ergonomic. The system has been thought out to give you the shortest direct route to the best result.

Sinar is also a leader in supplying information, and in investigation within the craft. They are great at identifying problems in photography and designing equipment to deal with them. Two point focusing and 4 f/stop photog-

raphy are just a few examples. As knowledge of the issues grows, the equipment evolves along with it.
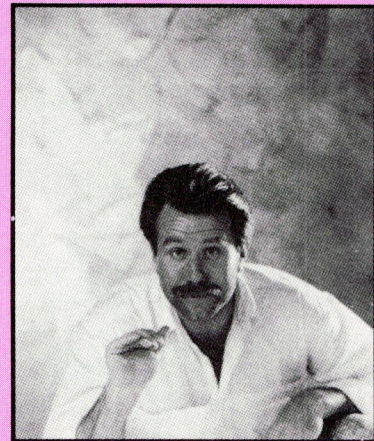
—Dean Collins
Collins & Associates
Lemon Grove, CA
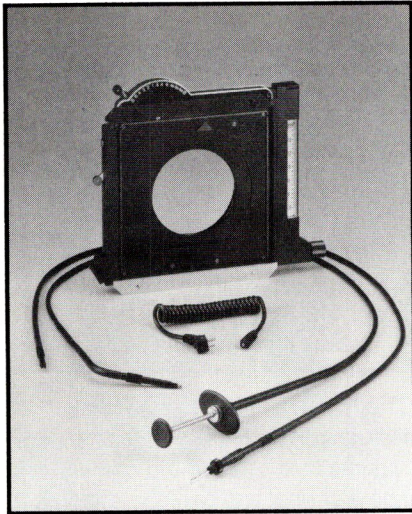
SINAR Auto Aperture Shutter

The Auto Aperture shutter lets you concentrate more on your shooting and less on the mechanics of camera operation. This shutter will allow you to control all operations from behind the camera where you should be. No more having to kneel down in front of your camera to see if the shutter is closed, stopped down or even cocked.

The shutter is always fully open so that you have maximum brightness on the ground glass. When you insert a film holder into the back of the camera, the shutter automatically closes down - no more lost sheets of film!

This self cocking mechanical shutter has speeds from 1/60th to 8 seconds plus bulb, along with an f/stop range from f/5.6 to f/45. You can even fit a four inch SINAR Color Control Filter on the back of the shutter.

To be used with the Auto Aperture Shutter, lenses must be mounted in the SINAR DB mount. If you already have lenses in shutters you can purchase a do-it-yourself DB conversion kit.

This shutter includes: cable release, auto cable and synch lead adapter.

22-2001 .... **$1699.00**

Cable Release
Replacement cable release for the Auto Aperture shutter.
22-2002 .... **$140.00**

Automatic Cable
Replacement cable, connects the shutter to the plateholder so that the film holder automatically closes the shutter.
22-2003 .... **$140.00**

Coupling Piece
Used to connect two auto cables when you have a long bellows extension.
22-2007 .... **$45.00**

Bayonet Piece
Replacement piece to attach the automatic cable to the camera back.
22-2004 .... **$37.00**

Automatic Adapter
For use on 8x10 back. Permits use of Lisco holders with round corners.
22-2006 .... **$28.00**
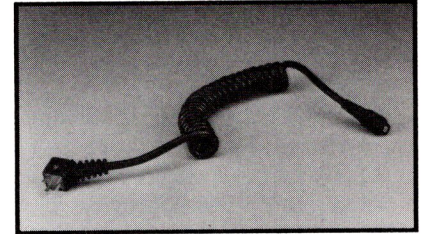
Synch Lead Adapter
Replacement coiled adapter to connect flash cables to the Digital and Auto Aperture Shutters.
22-3005 .... **$33.00**

Flash Sync Cable 5m
To connect Digital Shutter to various power packs by adding your own male plug.
22-3006 .... **$81.00**

SINAR ALLOWS CLOSER SHOOTING CONCENTRATION

Automatic Shutter Operations	Conventional Shutters	SINAR Shutters
Focusing:		
Auto opening of shutter	NO	YES
Auto opening of diaphragm	NO	YES
Exposure:		
Auto closing of shutter	NO	YES
Auto closing of diaphragm	NO	YES
Self cocking shutter	NO	YES
Inserting of filmholder	NO	NO
Pulling dark slide, exposing,		
Replacing slide	NO	NO
Removing of film	NO	NO
Number of manual operations:	8	3
With bellows hood, filters: Shutter speed and aperture settings easily accessable	NO	YES
TOTAL	9	3

9 to 3 in Favor of SINAR!

Digital Shutter System and Accessories

Digital Shutter

SINAR's highly advanced behind-the-lens shutter does not use conventional shutter leaves, but instead employs two blade design for extremely precise and accurate exposures. The electronically controlled shutter speeds range from 1/500th to 80 seconds plus bulb, and include a double exposure lock that may be overridden and a flash synch that may be fired at the start or the end of a long exposure.

In addition to these features you can add the SINAR Module II and the Sinarsix digital meter for total exposure control. If you are also a Broncolor user you can interface with your Pulso packs through the SINAR interface unit and the Broncolor Servor 3.

The shutter comes complete with (22-3005) synch lead adapter, (22-2005) 4 ft. shutter release and auto cable. However, it does require either the (22-3002) AC Power supply or the (22-3009) rapid battery charger with (22-3004) digital rail battery pack.

22-3001 .... **$4025.00**

Digital Rall Battery Pack

Power supply for the Digital Shutter. Mounts to the rail of the camera and has a connecting cable to attach it to the shutter. Does not include (22-3009) battery charger.

22-3004 .... **$476.00**

Module II

The Module II connects directly to the Digital Shutter. This unit processes intensity values for continuous light, strobe or mixed light with the use of the Sinarsix digital. When used with the Sinarsix the Module II can take spot readings directly off of the film plane, automatically compensating for bellows extension, filter factors, even lens flare. The Module II will even allow you to set reciprocity factors. You may also manually input values from a handheld meter.

22-3020 .... **$3289.00**

AC Power Supply

Allows use of 110V wall outlet in lieu of battery power. May also be used to charge both the Rail Battery Pack and the Module Battery Pack. Includes 6' AC cord.

22-3002 .... **$719.00**

SINARSIX Digital

Film Plane Metering Probe for the Module II / Digital Shutter combination. The probe can reach all areas of a 4x5 or 8x10 groundglass. Includes light meter holder and release cable.

22-3030 .... **$1898.00**
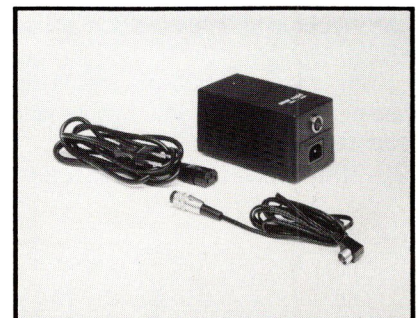
Rapld Battery Charger

110V rapid charger for Digital Shutter Batteries (22-3004) and (22-3011).

22-3009 .... **$518.00**

Module Battery Pack

Power supply for the Digtal Shutter / Module I / II combination. Mounts onto the Module I or II without connecting cables. Cannot be used with the shutter alone (use 23-3004 instead). Requires Battery Charger (23-3009).
22-3011 .... **$476.00**

Module Cable

Connects the Digital Shutter with either the Module I or II when the Module is mounted on the Module Carrier 22-3013 (not included).
22-3012 .... **$480.00**

Module Carrier

Allows either the Module I or II to be mounted behind the camera on the rail. Requires (22-3012).
22-3013 .... **$360.00**
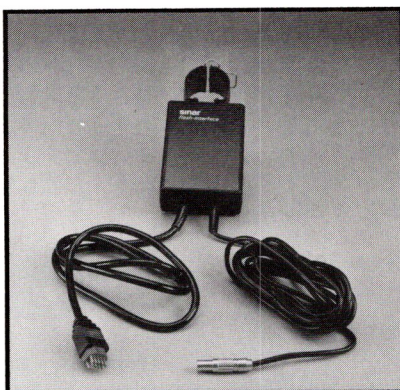
Interface

For use with the Module II, the SINAR Interface allows you to control your Broncolor Pulso pack through the SINAR Digital Shutter. Once you have your lighting set up the way you wish, simply meter your set and the interface unit will automatically control your power packs so that proper exposure is achieved.
22-2025 .... **$1565.00**

Digital Shutter Case

This compact and rugged case is designed to transport your Digital Shutter, Module II, Sinarsix digital, Rapid Battery charger and batteries in a convenient attache styled case.
23-5011 .... **$230.00**

Synch Lead Adapter

7cm adapter to connect flash cables to the Digital and Auto Aperture Shutters.
22-3005 .... **$33.00**
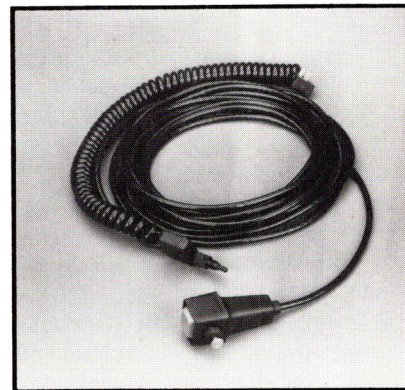
16ft Shutter Release and Auto Cable

This shutter release will let you work close up with your subject with a 16' range from the back of the camera. The release will allow for camera extensions up to 6'.
22-3015 .... **$239.00**

4 ft Shutter Release and Auto Cable

Standard release supplied with the shutter.
22-2005 .... **$191.00**

Release Cable for SINARSIX Digital

Release cable with short connection supplied with the SINARSIX Digital.
22-3031 .... **$159.00**

Electronics Digital Package

Everything you need for complete electronics on your SINAR camera supplied in a case designed for the shutter and all its accessories. This package is equipped with the following products:

Digital Shutter (22-3001)
Rail Battery (22-3004)
AC Power Supply (22-3002)
Module II (22-3020)
SINARSIX Digital (22-3030)
Digital Shutter Case (23-5011)

22-3080 .... **$8965.00**

Prices and specifications subject to change without notice.

sinaron Lenses

No matter what your camera format may be, your lens should deliver sharp, color-correct images with good contrast and optimum light transmission for easy, precise focusing. In selecting optics for 35mm and medium-format cameras, you need to consider these performance criteria, decide on the focal length appropriate to your purposes and you're set.

When it comes to achieving the best possible image and utilizing the full range of creative controls with an advanced view camera, other considerations come into play. Swings and tilts, the movements that make view cameras the choice for applications where ultimate image control is critical, necessitate concern over the lens' angle of coverage. Too narrow an angle will limit the extent of movement posssible without image cutoff or compromise in image quality.

Selecting a large-format lens

A few general rules of thumb for lens selection:
• A focal length of twice the long dimension of the film (240mm for 4x5, 480mm for 8x10) is useful for copy work and product shots.
• A focal length of three times the long dimension of the film is suitable for product photography, or for close-up

Equivalent Focal Lengths with similar angles of view for most popular formats (in mm)			
35mm	6x6	4x5	8x10
17	35	65	130
20	40	75	150
24	50	90	180
30	60	115	230
35	70	135	270
40	80	150	300
50	95	180	360
55	110	210	420
65	125	240	480
80	160	300	600
90	200	360	
125	250	480	

portraiture.
• Architectural and landscape lens selection is governed by perspective considerations and by available viewpoints. Shots involving extreme perspectives in close-up situations generally call for very short focal lengths.

The choice of actual lenses used thus depends on focal length, format, perspective, parallel shifts and also cost.

Consider, though, that a more expensive lens can often offer more versatility and cover multiple film formats, which in the long run would save money.

Concentrating on the Job

Traditionally, large-format lenses are supplied with their own individual shutters, as they have been for decades. All lenses supplied by SINAR are still available this way.

However, the traditional configuration does have its drawbacks. Between-the-lens shutters are completely manual - you have to open and close the diaphragm yourself, cock the shutter and remember to stop down the aperture after you focus. To set the shutter speed and f-stop, you have to move around to the front of the camera - not always easy if you're in a tight studio set or if your camera is perched on the edge of a cliff.

If you've ever forgotten to stop down before you shot, or pulled out the dark slide only to remember that the diaphragm is still open, you've probably realized that this is not the perfect solution.

The SINAR behind-the-lens shutters eliminate these problems.

• **Both shutter speed and aperture are set from behind the camera, and are always visible at a glance.**
• **The lens remains wide open until you shoot.**
• **When you insert a film holder, the shutter closes and the diaphragm stops down to the selected aperture.**

You'll never again lose a sheet of film to shutter operating errors.

To be used with the SINAR shutter system, lenses must be mounted on a SINAR DB board to allow automatic diaphragm control. Lenses are available in the DB mount, and DB conversion kits are available to convert most popular lenses to DB lenses in a matter of seconds.

sinaron Lenses - The Ultimate Accessory

Why sinaron?

sinaron lenses are:
- Manufactured to incredibly precise Swiss tolerances.
- Designed for optimum resolution, contrast and color rendition with minimal fall-off, distortion and flare.
- Mounted at the exact center of the lensboard and parallel aligned.
- Mounted with minimum deviation in centering and separation between the matched element groups.
- Tested for the best possible image performance.

The **sinaron** lens series is designed to allow you to take full advantage of the wide range of swings and tilts available on the SINAR cameras. **sinaron** lenses used with SINAR cameras provide matched bearing points on the lensboard and lens standard, and minimum deviations between the register of the film plane and the image standard bearing points.

New Expanded sinaron Lens Series

Sinar has added three new lines of high performance lenses to round out the **sinaron** family. Combined with the existing **sinarons,** these lenses offer you a solution to almost every photographic problem from critical color to extended coverage to extreme enlargement.

sinaron WS

- 80° angle of coverage
- Seven Element Design
- Apochromatic Design eliminates color fringing
- Improved performance at edges of field
- Performance is optimized for reproduction up to 1:3
- 150, 210 and 300mm

Macro-sinaron

- Optimized for extreme reproduction ratios
- Front and rear elements can be exchanged for ultimate image performance at up to 3:1
- High speed for easy focusing at extreme extensions
- 210 and 300mm

Apo sinaron

- Superior performance at 1:1 reproduction
- Image quality maintained at smaller ratios for complete flexibility
- Longer focal lengths for increased camera to subject distance
- Four element symmetrical design

Precision Performance

The curve at right shows the MTF (Modular Transfer Function) of a **sinaron** lens. Basically, it illustrates the amount of contrast (difference between light and dark areas) at a range of working apertures. A perfect lens would show a straight 100% across the board. Of

MTF (measured at 5 line pairs/mm in the angle of field area of 54°)

—— 210 mm SINARON S f/5.6, 72° angle
--- similar 210 mm f/5.6 lens, 72° angle, older type

course, this is not physically possible, so the performance of **sinaron** lenses has been optimized for the best possible contrast and resolution. Read the chart again, and see the difference in performance between **sinaron** and some of the older lenses you may still be using.
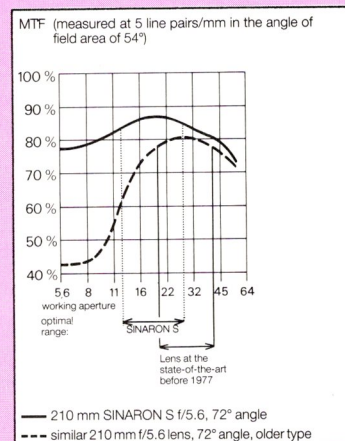
sinaron 5 year Unconditional Warranty*

Others Guarantee Their Glass.
sinaron Guarantees the Works.

Another clear **sinaron** advantage is our comprehensive five year unconditional warranty.

Sinar Bron will warranty all **sinaron** Copal or DB mounted lenses for a period of five years from date of purchase. This includes the glass, copal shutter or DB board. If any of these components fail within five years, Sinar Bron will repair or replace it at our option, free of charge.

* The only thing this warranty does not cover is misuse or abuse.
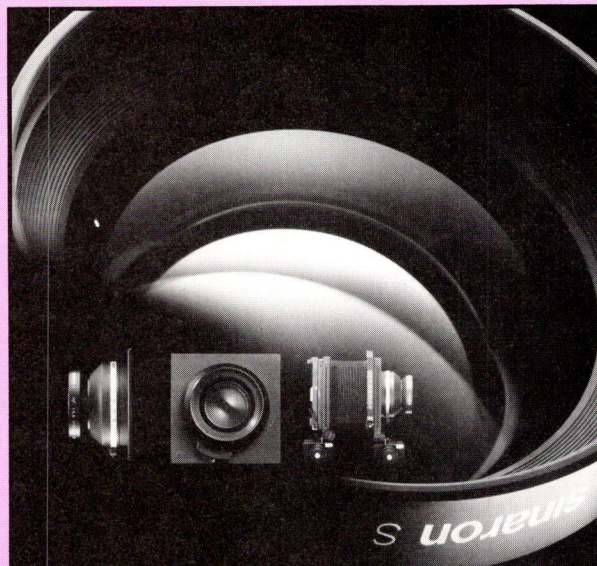
sinaron Lens Specifications

Lens type	mm	Angle of coverage	Copal Shutter	Filter thread	Image circle @ f/22	Shifts in mm at infinity and f/22 4x5 ↔	4x5 ↕	5x7 ↔	5x7 ↕	8x10 ↔	8x10 ↕	
sinaron-w f/4.5	65	105°	0	58	170mm	10	12	-	-	-	-	
	75	105°	0	67	195mm	25	29	-	-	-	-	
	90	105°	1	82	236mm	48	54	16	20	-	-	
sinaron-w f/6.8	75	102°	0	58	187mm	20	24	-	-	-	-	
	90	102°	0	67	221mm	40	45	7	9	-	-	
	115	104°	1	82	291mm	77	85	47	57	-	-	
	155	102°	1	105	382mm	125	133	95	110	42	50	
	135	72°	0	40.5	200mm	28	32	-	-	-	-	
	150	72°	0	49	214mm	36	41	2	3	-	-	
	180	72°	1	39	262mm	62	68	30	38	-	-	
sinaron-s f/5.6	210	72°	1	67	310mm	83	90	52	63	-	-	
	240	72°	3	77	350mm	108	116	79	92	23	28	
	300	72°	3	86	425mm	139	148	110	125	58	67	
f/6.8	360	64°	3	105	435mm	152	161	123	139	72	83	
f/9.0	480	56°	3	112	480mm	175	184	147	163	97	109	
sinaron-ws f/5.6	150	80°	1	72	252mm	56	63	26	33	-	-	
	210	80°	3	105	352mm	109	117	80	94	24	29	
	300		Available April 1991									
Macro sinaron f/5.6	210	64°	3	67	350mm	108	116	79	92	23	28	1:3
					525mm	202	208	170	188	121	135	1:1
					1050mm	463	474	436	457	393	414	3:1
	300	50°	3	77	360mm	115	123	85	99	30	36	1:3
					550mm	208	217	180	198	132	146	1:1
					1100mm	481	492	454	476	412	433	3:1
Apo sinaron f/9	150	48°	0	40.5	135mm	-	-	-	-	-	-	
	240	48°	1	49	212mm	35	39	-	-	-	-	
	300	48°	1	49	264mm	63	70	32	40	-	-	
	360	48°	3	58	318mm	92	99	62	74	3	4	
	480	46°	3	67	396mm	132	141	104	118	50	59	
	600	45°	-	95	496mm	-	-	156	172	106	119	

I began using Sinar and Broncolor equipment 15 years ago because, unlike their competition, they are a versatile, precision system. The equipment has proven to be reliable and virtually maintenance free. Things like the automatic shutters and control of the power packs in 1/10 stop increments gives me consistency and repeatability in exposure. That kind of precision is important to me.

—Neil Molinaro
Molinaro Photography, Clark, NJ

sinaron Lenses

Lens Type	mm	DB Conversion Kits		DB Mount Lenses		Copal Shutter Lenses w/o lensbd.		Copal Shutter Lenses on Lensbd.	
		Prod. No.	Price	Prod. No.	Price	Prod. No.	Price	Prod. No.	Price
sinaron-w									
f/4.5	65	24-1101	$412.00	24-3101E	$1394.00	24-7101	$1215.00	24-7201	$1283.00
f/4.5	75	24-1102	$412.00	24-3102	$1478.00	24-7102	$1330.00	24-7202	$1398.00
f/4.5	90	24-1103	$412.00	24-3103	$1610.00	24-7103	$1535.00	24-7203	$1603.00
f/6.8	75	24-1104	$412.00	24-3104	$1178.00	24-7104	$846.00	24-7204	$914.00
f/6.8	90	24-1105	$412.00	24-3105	$1178.00	24-7105	$934.00	24-7205	$1002.00
f/6.8	115	24-1106	$412.00	24-3106	$1699.00	24-7106	$1527.00	24-7206	$1595.00
f/6.8	155	N/A		N/A		24-7107	$3443.00	24-7207	$3511.00
sinaron-s									
f/5.6	135	24-1110	$412.00	24-3110	$636.00	24-7110	$525.00	24-7210	$593.00
f/5.6	150	24-1111	$412.00	24-3111	$685.00	24-7111	$562.00	24-7211	$630.00
f/5.6	180	24-1112	$412.00	24-3112	$803.00	24-7112	$738.00	24-7212	$806.00
f/5.6	210	24-1113	$412.00	24-3113	$850.00	24-7113	$821.00	24-7213	$889.00
f/5.6	240	24-1114	$574.00	24-3114	$1430.00	24-7114	$1361.00	24-7214	$1429.00
f/5.6 DBM	300	24-1115	$790.00	24-3115	$1933.00	24-7115	$1857.00	24-7215	$1925.00
f/6.8 DBM	360	24-1116	$790.00	24-3116	$2182.00	24-7116	$2100.00	24-7216	$2168.00
f/9.0 DBM	480	24-1117	$790.00	24-3117	$2945.00	24-7117	$2865.00	24-7217	$2933.00
sinaron-ws									
f/5.6	150	24-1118	$412.00	24-3118	$1400.00	24-7118	$1135.00	24-7218	$1203.00
f/5.6	210	24-1119	$790.00	24-3119	$2128.00	24-7119	$1784.00	24-7219	$1852.00
f/5.6	300	N/A		N/A		24-7120	$3888.00	24-7220	$3956.00
Macro sinaron									
f/5.6	210	24-1121	$574.00	24-3121	$1924.00	24-7121	$1626.00	24-7221	$1694.00
f/5.6 DBM	300	24-1122	$790.00	24-3122	$3875.00	24-7122	$3274.00	24-7222	$3342.00
Apo sinaron									
f/9	150	24-1125	$412.00	24-3125	$915.00	24-7125	$715.00	24-7225	$783.00
f/9 DBM	240	24-1126	$654.00	24-3126	$1220.00	24-7126	$935.00	24-7226	$1003.00
f/9 DBM	300	24-1127	$654.00	24-3127	$1369.00	24-7127	$1084.00	24-7227	$1152.00
f/9 DBM	360	24-1128	$790.00	24-3128	$1753.00	24-7128	$1513.00	24-7228	$1581.00
f/9 DBM	480	24-1129	$790.00	24-3129	$2115.00	24-7129	$1847.00	24-7229	$1915.00
f/9 CL	600	N/A		24-3130	$3254.00	N/A		N/A	

M   Manual override already built in for smaller aperture openings. Manual override may be ordered for any DB lens or conversion kit at an additional charge. Order regular product number plus (24-1061).

NF   With Manual iris diaphragm or perforated stop in place of spring loaded auto-aperture.

D   Discontinued, no longer available once stock is exhausted.

a)   Usable with Sinar Digital Shutter **ONLY.**

b)   Mounting possible by factory only. Allow 6-8 weeks.

c)   Not usable with Auto Aperture shutter or Digital shutter.

e)   Camera movements are limited while focused at infinity.

Lens Boards for SINAR Cameras

Blank	24-1001	$51.00
#0	24-1048	$68.00
#1	24-1049	$68.00
#3	24-1050	$68.00
Manual Override for DB Conversion add	24-1061	$229.00
Recess Board for 47mm f/5.6 Super Angulon	24-1052	$239.00
Recess Board for 65mm f/8 Super Angulon	24-1053	$239.00
X800 Board with spacer (State lens type)	24-1051	$170.00
Linhof Lensboard Adapter - Allows use of Linhof Technika mounted lenses on SINAR cameras.	24-1005	$335.00

Lensboard Holder
Prevents accidentally released lenses from falling off the standard
24-1002 .... $17.00

Lens Box
Keep your large format lenses safe whether they're on location or on the shelf. Accomodates most lenses with lensboards.
24-1003 .... $29.00

DB Conversion Kits

Rodenstock DB Conversion

Lens Type	mm	DB Conversion Prod. #	Price
Grandagon f/4.5 105°	65	N/A	
	75	24-1082	$412.00
	90	24-1084	$412.00
Grandagon f/6.8	75	24-1086	$412.00
	90	24-1088	$412.00
	115	24-1090	$412.00
	155	N/A	
Sironar-N f/5.6 72°	100	24-1014	$412.00
	135	24-1013	$412.00
	150	24-1015	$412.00
	180	24-1016	$412.00
	210	24-1017	$412.00
	240	24-1029	$574.00
f/6.8 64°	360	24-1031	$790.00
f/8.4 56°	480	N/A	
Makro-Sironar f/5.6	210	24-1066	$574.00
	300	24-1067	$790.00
Apo-Sir. MC f/5.6	150	24-1091	$412.00
	210	24-1092	$790.00
Apo-Ronar f/9	150	24-1080	$412.00
	240	24-1032	$654.00
	300	24-1033	$654.00
	360	24-1034	$790.00
	420	24-1035	$790.00
	480	24-1036	$790.00
	600	N/A	

Schneider DB Conversion

Lens Type	mm	DB Conversion Prod. #	Price
Super Angulon 105° f5.6	65	N/A	
	75	24-1021	$412.00
	90	24-1022	$412.00
Super Angulon 100° f/8	75	24-1023	$412.00
	90	24-1019	$412.00
	120	24-1020	$654.00
	165	24-1071	$2950.00
	210	24-1072	$3225.00
Symmar -S 70° f/5.6	100	24-1024	$412.00
	120	24-1073	$412.00
	135	24-1025	$412.00
	150	24-1018	$412.00
	180	24-1026	$412.00
	210	24-1027	$412.00
	240	24-1028	$574.00
	300	24-1007	$790.00
f/6.8 70°	360	24-1008	$790.00
f/8.4 56°	480	24-1009	$790.00
Sup. Symmar HM 80° f 5.6	150	24-1076	$412.00
	210	24-1077	$574.00
Apo-Symmar f 5.6	120	24-1093	$412.00
	150	24-1094	$412.00
	210	24-1095	$412.00

Nikkor DB Conversion Kits

Lens Type	mm	DB Conversion Prod. #	Price
Nikkor SW f/4.5	75	24-1068	$412.00
	90	24-1044	$412.00
f/8	90	24-1075	$412.00
Nikkor W f/5.6	100	24-1069	$412.00
	135	24-1037	$412.00
	150	24-1038	$412.00
	180	24-1039	$412.00
	210	24-1040	$412.00
Nikkor W f/6.3	240	24-1041	$574.00
	300	24-1042	$790.00
Nikkor M f/9	300	24-1046	$654.00
	450	24-1063	$790.00
Nik. AM-ED f5.6	120	24-1070	$412.00

1-(800) 456-0203
Orders and Information

See The World In Color
Sinar Color Control Filters

Color Correction Filters

"CC" filters, as their name implies, are used to correct color casts caused by the balance of your film, the color of the light or reciprocity failure. The designation of each filter indicates its color and density (eg. CC20M is an 0.20 Magenta filter). Each CC filter absorbs its complementary color, as shown here:

For This Color Cast	Use This CC Filter	For This Color Cast	Use This CC Filter
Cyan	Red	Red	Cyan
Yellow	Blue	Blue	Yellow
Magenta	Green	Green	Magenta

CC (and CTC) filters are especially useful for correcting the color casts of fluorescent lights. Below are some approximate filter combinations for popular types of fluorescent lights. Only testing can determine the exact filtration for any given situation.

Type of Tube	Daylight Film	Tungsten Film
Daylight	40Y+40M	30Y+40M+CTC 85B
White	30M+20C	50Y+60M
Warm White	40M+40C	40Y+50M
Warm White Dlx.	30M+60C	10Y+10M
Cool White	30M	50R+10R
Cool White Deluxe	10M+20C	40Y+20M

Color Temperature Correction Filters

"CTC" filters compensate for differences between the color temperature of the light source and the film's own color balance. There are two basic types of CTC filters, those which have a warming effect, and those which have a cooling effect.

- **81 and 85 designations are warming filters,** with the yellowish 81 series weaker than the orange 85's.
- **The 80 and 82 series are cooling filters,** with the series 80 filters providing the most correction.
- **Color temperature meters** such as the Broncolor FCC will tell you the correction needed for your type of film. You can also make these calculations yourself with a simple scale called a nomogram. For a copy, call or write to request our Color Control Filter brochure.

Neutral Density Filters

"ND" filters reduce the amount of light entering the lens without affecting color temperature. They are calibrated in 1/3 f-stops, so an ND3 filter would reduce light transmission by one f-stop.

You can use neutral density filters to shoot at large apertures or slow shutter speeds in bright-light situations. This allows you more creative flexibility with selective focus and shallow depth of field. With enough ND filtration, you can even use time exposure to make a fast-moving crowd disappear in broad daylight.

Graduated Filters

Graduated filters increase in density over their length, providing a smooth gradation of color or density across your image.

- **Neutral density graduates** let you compensate for drastic exposure differences by, for example, reducing the intensity of the sky in a photograph while leaving the rest of the image unchanged.
- **Colored graduates** provide a gradual increase in color, creating exciting possibilities when you selectively add color casts to parts of your image. Different combinations of aperture and lens-to-filter distance let you achieve as gradual or abrupt a graduation as you desire.

Black and White Contrast Filters

Contrast filters used in black and white photography pass light of their own color while blocking others.

- **To darken a particular color, use the opposite filter.** To darken a blue sky for added impact, use a yellow (holds back blue) or red (holds back cyan) filter. Blue light is held back, so blue areas appear underexposed. The sky darkens, and clouds appear to stand out.
- **Lighten a color with a filter of the same color.** For example, a green or yellow/green filter will lighten foliage, which often reproduces darker in black and white.

Special Filters

These filters give you the capability to fine-tune the appearance of your image.

- **Polarizing filters** use their unique light-absorbing characteristics to reduce unwanted reflections and increase color saturation.
- **Diffusion and soft focus filters** use a textured surface to deliberately soften your image. The **fog filter** uses a slightly milky layer for a similar effect.
- **Star filters** create 4, 6 or 8-point stars wherever a spot of light occurs in the image.

SINAR Color Control Filter System

The SINAR COLOR CONTROL filter system is designed for the practical professional and meets all needs. The filters are made of a special synthetic resin that transmits more light than glass, yet has a lower refractive index.

Optically, SINAR COLOR CONTROL filters match the best dyed-in-the-mass glass filters - but without the latter's weight, fragility, and cost problems. Moreover, dyeing optical glass is restricted to just a few hues. SINAR COLOR CONTROL filters, on the other hand, rely on a new mass-dyeing process for any hue and density.

SINAR COLOR CONTROL FILTERS
- Are optically plane parallel.
- Are lightweight, virtually unbreakable, and scratch-resistant.
- Offer precise, edge-to-edge uniform density and coloration.
- Are dyed-in-the-mass and therefore show consistent optical characteristics.
- Precisely meet Kodak absorption standards.
- Fit ALL camera systems of ALL sizes.
- Are equally usable on video and movie cameras.
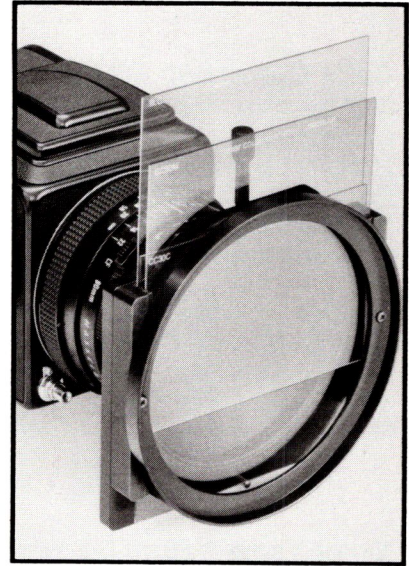
COLOR CORRECTION	125 mm 5 Inch $86.00	100 mm 4 Inch $29.00	75 mm 3 Inch $21.00
CYAN 025	59-1103	59-2103	59-3103
CYAN 05	59-1105	59-2105	59-3105
CYAN 10	59-1110	59-2110	59-3110
CYAN 15	59-1115	59-2115	59-3115
CYAN 20	59-1120	59-2120	59-3120
CYAN 30	59-1130	59-2130	59-3130
CYAN 40	59-1140	59-2140	59-3140
CYAN 50	59-1150	59-2150	59-3150
MAGENTA 025	59-1203	59-2203	59-3203
MAGENTA 05	59-1205	59-2205	59-3205
MAGENTA 10	59-1210	59-2210	59-3210
MAGENTA 15	59-1215	59-2215	59-3215
MAGENTA 20	59-1220	59-2220	59-3220
MAGENTA 30	59-1230	59-2230	59-3230
MAGENTA 40	59-1240	59-2240	59-3240
MAGENTA 50	59-1250	59-2250	59-3250
YELLOW 025	59-1303	59-2303	59-3303
YELLOW 05	59-1305	59-2305	59-3305
YELLOW 10	59-1310	59-2310	59-3310
YELLOW 15	59-1315	59-2315	59-3315
YELLOW 20	59-1320	59-2320	59-3320
YELLOW 30	59-1330	59-2330	59-3330
YELLOW 40	59-1340	59-2340	59-3340
YELLOW 50	59-1350	59-2350	59-3350

COLOR CORRECTION	125 mm 5 Inch $86.00	100 mm 4 Inch $29.00	75 mm 3 Inch $21.00
RED 025	59-1403	59-2403	59-3403
RED 05	59-1405	59-2405	59-3405
RED 10	59-1410	59-2410	59-3410
RED 15	59-1415	59-2415	59-3415
RED 20	59-1420	59-2420	59-3420
RED 30	59-1430	59-2430	59-3430
RED 40	59-1440	59-2440	59-3440
RED 50	59-1450	59-2450	59-3450
GREEN 025	59-1503	59-2503	59-3503
GREEN 05	59-1505	59-2505	59-3505
GREEN 10	59-1510	59-2510	59-3510
GREEN 15	59-1515	59-2515	59-3515
GREEN 20	59-1520	59-2520	59-3520
GREEN 30	59-1530	59-2530	59-3530
GREEN 40	59-1540	59-2540	59-3540
GREEN 50	59-1550	59-2550	59-3550
BLUE 025	59-1603	59-2603	59-3603
BLUE 05	59-1605	59-2605	59-3605
BLUE 10	59-1610	59-2610	59-3610
BLUE 15	59-1615	59-2615	59-3615
BLUE 20	59-1620	59-2620	59-3620
BLUE 30	59-1630	59-2630	59-3630
BLUE 40	59-1640	59-2640	59-3640
BLUE 50	59-1650	59-2650	59-3650

Sinar Color Control Cleaning Kit
SCC filters should only be cleaned with this specially formulated solution. Use of other cleaning agents may fog the filter. Kit contains solution and cleaning cloth.

51-0079 ....$32.00

SINAR Color Control Filter System

COLOR TEMPERATURE CORRECTION	125 mm 5 Inch $99.00	100 mm 4 Inch $33.00	75mm 3 Inch $26.00
CTC 80A	59-1801	59-2801	59-3801
CTC 80B	59-1802	59-2802	59-3802
CTC 80C	59-1803	59-2803	59-3803
CTC 80D	59-1804	59-2804	59-3804
CTC 81	59-1810	59-2810	59-3810
CTC 81A	59-1811	59-2811	59-3811
CTC 81B	59-1812	59-2812	59-3812
CTC 81C	59-1813	59-2813	59-3813
CTC 81D	59-1814	59-2814	59-3814
CTC 81EF	59-1815	59-2815	59-3815
CTC 82	59-1820	59-2820	59-3820
CTC 82A	59-1821	59-2821	59-3821
CTC 82B	59-1822	59-2822	59-3822
CTC 82C	59-1823	59-2823	59-3823
CTC 85	59-1850	59-2850	59-3850
CTC 85B	59-1852	59-2852	59-3852
CTC 85C	59-1853	59-2853	59-3853

BLACK & WHITE:	$86.00	$29.00	$21.00
# 8 YELLOW	59-1703	59-2703	59-3703
#25 RED	59-1704	59-2704	59-3704
#1A SKYLIGHT	59-1710	59-2710	59-3710
#2B UV	59-1715	59-2715	59-3715
#16 ORANGE	59-1720	59-2720	59-3720
#38 LIGHT BLUE	59-1725	59-2725	59-3725
#47B DARK BLUE	59-1726	59-2726	59-3726
#11 YEL./GREEN	59-1730	59-2730	59-3730

NEUTRAL DENSITY:	125 mm 5 Inch $199.00	100 mm 4 Inch $95.00	75mm 3 Inch $51.00
0.1 N.D. (1/3 stop)	59-1010	59-2010	59-3010
0.2 N.D. (2/3 stop)	59-1020	59-2020	59-3020
0.3 N.D. (1 stop)	59-1030	59-2030	59-3030
0.6 N.D. (2 stop)	59-1040	59-2040	59-3040
0.9 N.D. (3 stop)	59-1050	59-2050	59-3050

POLARISERS	$545.00	$360.00	
	59-1750	59-2750	N/A

GRADUATES:	$199.00	$72.00	
YELLOW	59-1903	59-2903	
BLUE	59-1906	59-2906	
SEPIA	59-1911	59-2911	
TABAC	59-1912	59-2912	N/A
VIOLET	59-1913	59-2913	
CORAL	59-1914	59-2914	
PINK	59-1915	59-2915	
	$199.00	$95.00	
0.3 N.D. (0-1 stop)	59-1930	59-2930	
0.6 N.D. (0-2 stop)	59-1960	59-2960	
0.9 N.D. (0-3 stop)	59-1990	59-2990	

SPECIAL EFFECT	$113.00	$45.00	$31.00
SOFT FOCUS	59-1751	59-2751	59-3751
DIFFUSER	59-1752	59-2752	59-3752
FOG	59-1753	59-2753	59-3753
STAR 4MM 4 PT.	59-1756	59-2756	59-3756
STAR 4MM 6 PT.	59-1754	59-2754	59-3754
STAR 4MM 8 PT.	59-1755	59-2755	59-3755

COLOR METER KIT

The SINAR Color Meter Kit includes all the filters necessary to make color corrections based on readings from the Broncolor FCC or the Minolta Color Meter. It also includes a filter wallet for storage and a SINAR Color Control Filter cleaning kit.

75mm Kit
1- Filter Cleaning Kit
11- Color Correction Filters
   Magenta, Green
   in each of 6 Densities (0.025, 0.05, 0.10, 0.20, 0.30, 0.40)
17 Color Temperature Filters
   Blue (80A, 80B, 80C, 80D, 82, 82A, 82B, 82C)
   Orange (81, 81A, 81B, 81C, 81D, 81EF, 85, 85B, 85C)

51-3200 .... $625.00

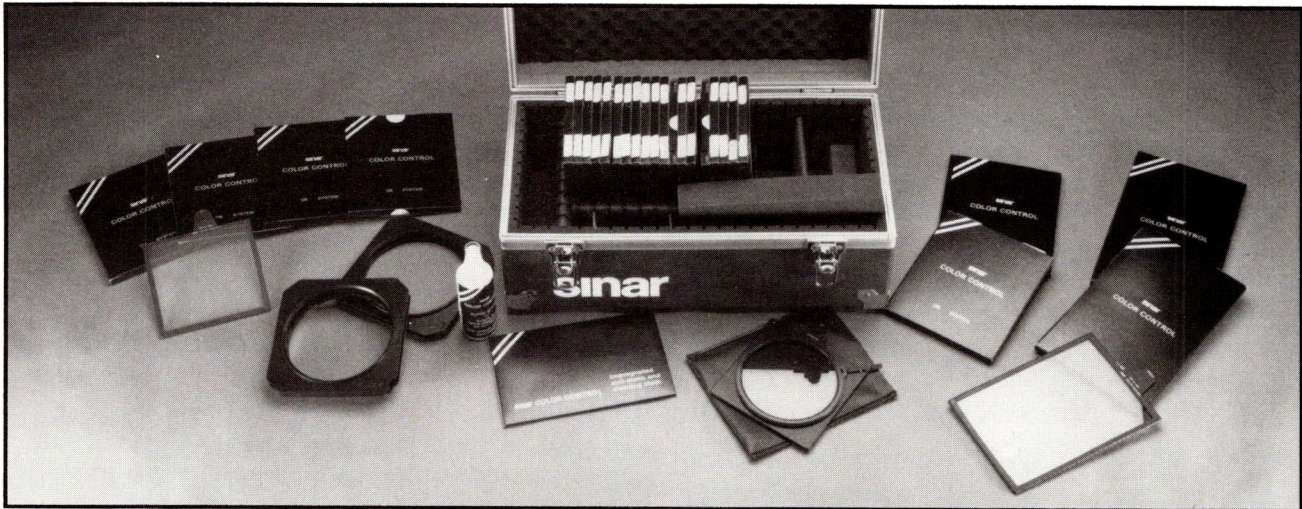### 100mm Kit
1- 100mm Wallet
1- Filter Cleaning Kit
11- Color Correction Filters
   Magenta, Green
   in each of 6 Densities (0.025, 0.05, 0.10, 0.20, 0.30, 0.40)
17- Color Temperature Filters
   Blue (80A, 80B, 80C, 80D, 82, 82A, 82B, 82C)
   Orange (81, 81A, 81B, 81C, 81D, 81EF, 85, 85B, 85C)

51-2200 .... $789.00

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SINAR Color Control Filter System Kits

75mm Standard Kit

Includes:
- 1 SCC Filter Cleaning Kit
- 18 CC Filters
  Cyan, Magenta, Yellow
  Red, Green, Blue
  each in 0.05, 0.10, 0.20 densities
- 2 Color Temperature Correction Filters
  80A blue, 85B orange
- 3 Black and White Contrast Filters
  #1A skylight, #11 yellow/green, #16 orange
- 2 Neutral Density Filters
  0.3ND, 0.6ND
- 2 Special Effects Filters
  Soft-focus, 4mm-6pt. star filter

27 Filters total
51-3600 .... **$690.00**

100mm Standard Kit

Includes:
- 1 100mm Wallet
- 1 SCC Filter Cleaning Kit
- 1 Filterholder
- 2 Adapters - M67, M82
- 18 CC Filters
  Cyan, Magenta, Yellow
  Red, Green, Blue
  each in 0.05, 0.10, 0.20 Densities
- 2 Color Temperature Correction Filters
  80A blue, 85B orange
- 3 Black and White Contrast Filters
  #1A skylight, #11 yellow/green, #16 orange
- 2 Neutral Density Filters
  0.3ND, 0.6ND
- 3 Special Effects Filters
  Polarizer, soft-focus, 4mm-6pt. star filter
- 2 Graduated Filters
  0.6ND, Tabac

30 Filters total
51-2600 .... **$1695.00**

125mm Standard Kit

Includes:
- 1 Filter Case (55-1771)
- 1 SCC FilterCcleaning Kit
- 2 Filterholders (55-1711, 55-1721)
- 2 Adapters - M67, M82
- 18 CC Filters
  Cyan, Magenta, Yellow
  Red, Green, Blue
  each in 0.05, 0.10, 0.20 Densities
- 2 Color Temperature Correction Filters
  80A blue, 85B orange
- 3 Black and White Contrast Filters
  #1A skylight, #11 yellow/green, #16 orange
- 2 Neutral Density Filters
  0.3ND, 0.6ND
- 3 Special Effects Filters
  Polarizer, Soft-focus, 4mm-6pt. star filter
- 2 Graduated Filters
  0.6ND, Tabac

30 Filters total
51-1600 .... **$3175.00**

Expert Filter Kits

100mm Expert Kit

Includes:
- 1 100mm Wallet
- 1 SCC Filter Cleaning Kit
- 4 Adapters
  M49, M58, M77, Hasselblad 60
- 36 CC Filters
  Cyan, Magenta, Yellow, Red, Green, Blue
  each in 0.025, 0.05, 0.10, 0.15, 0.20, 0.30 Densities
- 5 Color Temperature Correction Filters
  80A blue, 81A orange, 82A blue, 85 orange, 85B orange
- 8 Black and White Contrast Filters
  #1A skylight, #8 yellow, #11 yellow/green, #16 orange, #25 red, #59 light
  green, #2B ultraviolet, #38 light blue
- 3 Neutral Density Filters
  0.3ND, 0.6ND, 0.9ND
- 5 Special Effects Filters
  Polarizer, soft-focus, diffuser, 4mm-6pt. star filter, 4mm-8pt. star filter
- 5 Graduated Filters
  0.3ND, 0.6ND, 0.9ND, Tabac, Blue

62 Filters total
51-2700 .... **$2990.00**

125mm Expert Kit

Includes:
- 1 Filter Storage Box
- 1 SCC Filter Cleaning Kit
- 5 Adapters
  M49, M58, M77, M82, M86
- 36 CC Filters
  Cyan, Magenta, Yellow, Red, Green, Blue
  each in 0.025, 0.05, 0.10, 0.15, 0.20, 0.30 Densities
- 5 Color Temperature Correction Filters
  80A blue, 81A orange, 82A blue, 85 orange, 85B orange
- 8 Black and White Contrast Filters
  #1A skylight, #8 yellow, #11 yellow/green, #16 orange, #25 red, #59 light
  green, #2B ultraviolet, #38 light blue
- 3 Neutral Density Filters
  0.3ND, 0.6ND, 0.9ND
- 5 Special Effects Filters
  Polarizer, soft-focus, diffuser, 4mm-6pt. star filter, 4mm-8pt. star filter
- 5 Graduated Filters
  0.3ND, 0.6ND, 0.9ND, Tabac, Blue

62 Filters total
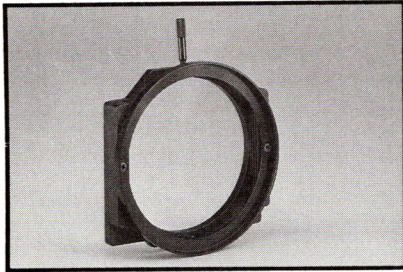51-1700 .... **$6250.00**
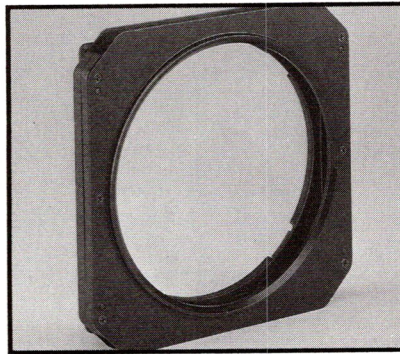
Filterholders and Adapter Rings

Filterholder 100
Holds three 100mm (4 inch) filters. Attaches to lens threads with an adapter ring. Includes 3-25mm lens shades.
55-2751 .... **$225.00**

Replacement Tube 25mm
for 55-2751
55-2010 .... **$17.00**

Filter Storage Box
Holds 30 125mm filters, 4 graduates, 1 Filterholder-1, 1 Filterholder-2, 6 adapters and 1 filter cleaning kit.
55-1771 .... **$299.00**

Filterholder-1
Holds one 125mm (5 inch) filter. Attaches to lens threads with adapter ring.
55-1711 .... **$205.00**

Filterholder-2
Same as Filterholder-1, for two filters.
55-1721 .... **$225.00**

Wood Filter Box
This lightweight container holds 10 4-inch SCC filters, except for graduates.
55-1769 .... **$48.00**
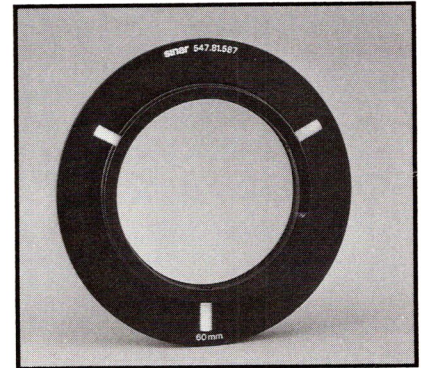
Behind-the-Lens Adapter Ring 42mm
Fits rear lens diameter 31.5-42mm
58-3042 .... **$65.00**

60mm
Fits rear diameter 42.1-60mm
58-3060 .... **$65.00**

80mm
Fits rear lens diameter 60.1-80mm
58-3080 .... **$65.00**
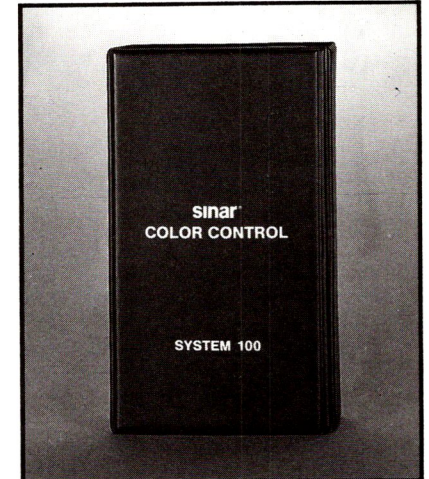
Wallet
100mm / 4 inch
55-2772 .... **$52.00**

100mm Adapter Rings			125mm Adapter Rings		
Size	**Cat. #**	**Price**	**Size**	**Cat. #**	**Price**
40mm	58-2040	$49.00	40mm *	58-1040	$84.00
49mm	58-2049	$49.00	49mm *	58-1049	$84.00
52mm	58-2052	$49.00	52mm *	58-1052	$84.00
55mm	58-2055	$49.00	58mm *	58-1058	$84.00
58mm	58-2058	$49.00	67mm *	58-1067	$84.00
62mm	58-2062	$49.00	77mm *	58-1077	$84.00
67mm	58-2067	$49.00	82mm *	58-1082	$84.00
72mm	58-2072	$49.00	86mm *	58-1086	$84.00
77mm	58-2077	$49.00	95mm *	58-1095	$84.00
82mm	58-2082	$49.00	100mm	58-1100	$84.00
86mm	58-2086	$49.00	105mm	58-1105	$84.00
Rollei	58-2271	$95.00	110mm	58-1110	$84.00
Hass.-60	58-2270	$95.00	112mm	58-1112	$84.00
Hass.-50	58-2269	$95.00	120mm	58-1120	$84.00
			127mm	58-1127	$84.00

* May also be used with filter system 100; may cause inconvenience due to large external diameter.

Teleview Electronic Imaging
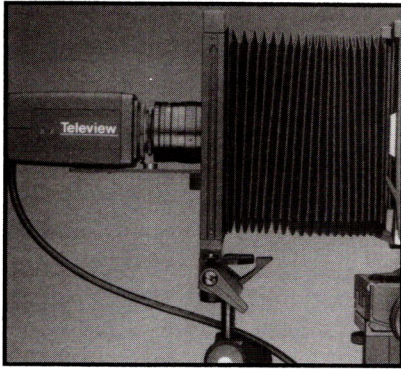
Teleview Camera Back

This compact high resolution video camera attaches to the back of a SINAR view camera via the multipurpose standard f1. It allows you to view the ground glass on the set via a monitor (sold separately) as opposed to climbing up and down a ladder.

The camera comes complete with a special flat field lens, drive unit, and camera adapter.

26-1010 .... **$2350.00**

Cables

BNC to BNC cable to connect drive unit to monitor.

26-1015 .... **$50.00**

Camera Back Package 4x5

This package includes the Teleview camera back (26-1010), cables (26-1015), JVC TMR9U Monitor (26-1025), Multipurpose standard (23-2210) and 4x5 Square bellows (23-3004)

26-1001 .... **$3975.00**

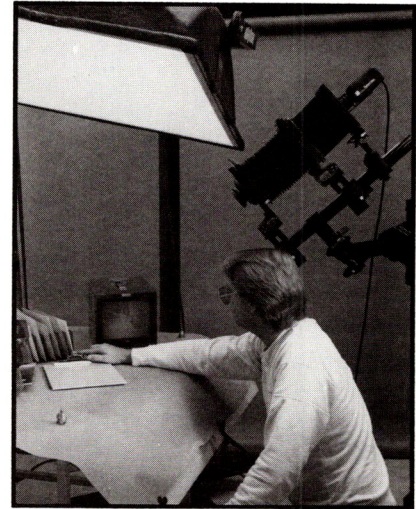### Camera Back Package 8x10

Same package as above but with the 8x10 bellows (23-3008) in place of the 4x5 square bellows for use on 8x10.

26-1005 .... **$4445.00**

JVC TMR9U 9" Monitor

26-1025 .... **$950.00**

The Teleview Camera Back Package allows you to see changes in your set from the camera position as you make them.

Travel with us for a moment into the future. Picture yourself in the studio of a photographer, say, 20 years from now. What might you expect to find?

Naturally, you can expect to find the photographer, his subject and an assortment of lighting and imaging equipment.

What you won't find are discarded test shots littering the floor, art directors peering over the photographer's shoulder or a set sitting idle due to approval lags and down time. The studio is an efficient one. Each shot is set up and completed without wasted time or repetitious procedures. How is this possible? Let's take a closer look at the photographer's equipment.

His camera and lights are pretty much the same as we're used to seeing; the standard really haven't changed much. There is something else, though. The photographer is using some sort of video imaging system. The system has provided a link between the studio's camera and a small computer.

The computer is allowing the photographer to manipulate his photo in ways that we never thought possible. How does it work? Let's ask for a demonstration.

First, the photographer shows us how a special video adapter unit attached to the back of his view camera transfers the exact image from the ground glass to a high-quality video monitor. The monitor is positioned so that it can be seen from the subject area. This way, the photographer can reposition his model and props and immediately see the results in the monitor. He doesn't have to get behind the camera every time he makes a change. The image in

The image in the monitor reflects the exact focal length of the camera lens, depth of field and cropping of the photographic image, and it is right side up for easy viewing!

the monitor reflects the exact focal length of the camera lens, depth of field and cropping of the photographic image. There's just one difference - the image in the monitor is right side up for easy viewing!

SINAR Telecommunication System

Conversion kit and software for image transmission over phone lines.

This allows the user to digitize the image from Teleview or other NTSC video device for storage in a personal computer for transmission over phone lines to another computer. The kit requires an IBM PC -AT or AT compatible (for speed of transmission) with at least 640KB of memory. A hard disk is recommended for storage of images. The computer must have 3 expansion slots available for circuit boards.

Requires:
- IBM PC AT compatible with 640 KB of memory
- High resolution monitor
- 20MB hard disk

Includes:
- 2 - Proprietary circuit bds.
- 1 - Graphics tablet
- 1 - 9600 Baud Modem
- Software for digitizing, compression, storage and transmission 1 - hour of telephone consultation

26-2001 .... **$12,575.00**

Note: Two systems are required for communications between computers.

SINAR Image Manipulation System

Conversion kit and software for image manipulation.

This system allows the user to create or modify Teleview images. This includes freehand painting, airbrushing, pixel cloning, tinting, compositing, typography, and many other tools. The system provides the user with a resolution of 512x400 pixels and 32,768 colors. The images can be stored on PC disks or printed on color thermal transfer printers or film recorders (optional equipment). This system is compatible with any NTSC-standard video camera or VCR, as well as the Teleview camera back module.

Requires:
- IBM PC AT compatible computer with 640 KB of memory
- High resolution color monitor
- 20MB hard disk -CGA card
- Spare option slot

Includes:
- 1 - Circuit board
- 1 - Graphics tablet
- 1 - Software for above

26-2010 .... **$6,840.00**

NOTE: Full price of the Image Manipulation System is deductible on subsequent order of the Communications system.

For installation into the customer's computer and testing of the equipment at Edison, New Jersey or Minneapolis, Minnesota, please add $500. Customer service and telephone assistance is available at a rate of $75.00/hour, or at a flat rate of $100 per month minimum of six months.
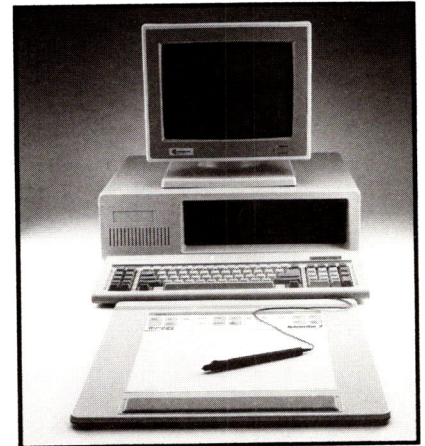
A complete system with an IBM PC-AT compatible computer, high resolution monitor, 20MB hard disk, video switch and 9600 baud modem is available. This system is pre-tested before delivery.

26-2005 .... **$17,575.00**

Before the photographer takes the photo, he wants to get an approval from project's art director. The art director, as we mentioned, is not in the studio, she's at her office. If a test shot were taken and delivered to her it could take hours. But it's not going to. The photographer captures the image from the video monitor onto his computer and, using a simple telephone modem, sends the image to the art director's computer.

Because this is a very special project, the art director invited the client to her office to view the test shot. After a brief consultation with the client, she communicates her comments and recommended changes to the photographer using either the computer keyboard or a special penwriter pad that allows her to write directly on the photo image.

This time, she wants the photographer to tilt an object in the photo 30 degrees to the right. Before actually altering the position of the object, the photographer uses the "pixel cloning" capabilities of the computer to alter the video image and examine the results.

The whole consultation process has taken no more than 1/2 hour and the shot is completed in less than an hour.

The photographer is now free to move on to his next money-making project. He explains that this system has greatly enhanced his studio productivity and bottom-line profits.

Now let's come back to the present. We really didn't have to take you 20 years into the future to show you this sophisticated system. The video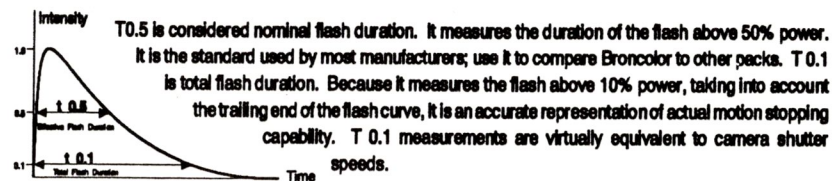 and computer technology we spoke of exists today. It exists in Teleview, the new video imaging system from Sinar Bron. Hook Teleview right into your current IBM compatible computer and bring tomorrow's technology into your studio today!

The video and computer technology exists today in Teleview, the new video imaging system from Sinar Bron. Bring tomorrow's technology into your studio today!

The Broncolor System

	Flashman	Flashman 2	Opus 2	Opus 4	Opus A2	Opus A4	Pulso 2	Pulso 4	Pulso 8	Pulso A2	Pulso A4
Capacity	950Ws	1900Ws	1600Ws	3200Ws	1600Ws	3200Ws	1600Ws	3200Ws	6400Ws	1600Ws	3200Ws
Output[1]	f/45 2/3	f/64 2/3	f/64 1/3	f/90 1/3	f/64 1/3	f/90 1/3	f/64 1/3	f/90 1/3	f/128 1/3	f/64 1/3	f/90 1/3
Minimum Duration t 0.1	1/700	1/400	1/530	1/270	1/530	1/270	1/800	1/300	1/240	1/6000	1/6000
t 0.5	1/1700	1/1100	1/1700	1/850	1/1700	1/850	1/2000	1/1000	1/800		
100% Recycle Time	0.5-1 sec	1.2-2.4 sec	0.5-1.9 sec.	0.7-3.6 sec.	0.5-1.9 sec.	0.7-3.6 sec.	0.5-1.9 sec.	0.7-3.6 sec.	0.9-4.8 sec.	0.2-1.9 sec.	0.3-3.6 sec.
Cordless Triggering	IR/Cell	IR/Cell	Separate Infrared Triggering or White Light Slave								
Adjustment Range	2 stops	2 stops	4 stops	4 stops	4 stops	4 stops	4 stops	4 stops	4 stops	6 stops	6 stops
Adjustment Increments	1/3 stops	1/3 stops	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10	1/3 or 1/10
Proportional Modeling Light	250W	250W	250W	250W	250W	250W	250W	250W	650W	250W	250W
Distribution	Symm	Symm	Symm	Symm	Asymm/Symm	Asymm/Symm	Symm	Symm	Symm	Asymm/Symm	Asymm/Symm
Lamphead Outlets	3	3	3	3	3	3	4	4	4	4	4
Flash Sequence	—	—	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes	Yes	Yes	Yes[2]	Yes[2]
Trigger Delay	—	—	0.1-9.9 sec.	0.1-9.9 sec.	0.1-9.9 sec.	0.1-9.9 sec.	0.1-9.9 sec.	0.1-9.9 sec.	0.1-9.9 sec.	0.01-99.99 sec.	0.01-99.99 sec.
Sequence Delay	—	—	Yes	Yes	Yes	Yes	—	—	—	Yes	Yes
"Ping Pong" Release[3]	—	—	Yes	Yes	Yes	Yes	—	—	—	Yes	Yes
TTL Metering[4]	—	—	—	—	—	—	—	—	—	Yes	Yes
Flash Duration Control	Possible with addition of Varipuls[5]						—	—	—	Yes	Yes
Color Temperature Control	—	—	—	—	—	—	—	—	—	Yes	Yes
Stroboscopic Mode	—	—	—	—	—	—	—	—	—	Yes	Yes
Remote Capability[6]	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IR Triggering Channels[7]	All	All	2	2	2	2	2	2	2	2	2
Buzzer On/Off	—	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Requirements	110V/15A	110V/15A	110V/15A	110V/15A	110V/15A	110V/15A	110V/15A	110V/15A	220-240V/10A	110V/15A	110V/15A
Dimensions	8x11x11	8x11x14	7x11x11	7x11x14	7x11x11	7x11x14	8x13x14	8x13x16	8x13x21	8x13x14	8x13x16
Weight	15 lb.	21 lb.	16 lb.	23 lb.	16 lb.	23 lb.	27 lb.	33 lb.	46 lb.	30 lb.	36 lb.
Catalog Number	10-1010	10-1012	10-0020	10-0040	10-0025	10-0045	10-1020	10-1040	10-1060	10-1025	10-1045
Price	$1790.00	$2790.00	$3200.00	$5100.00	$3900.00	$5900.00	$4300.00	$6400.00	$8800.00	$5700.00	$7900.00

1. Output measured at 6 1/2 feet (2 meters) with P70 reflector, ISO 100.
2. Trigger delay and flash sequence can be combined on these packs.
3. "Ping Pong" release fires two packs alternately for ultra-fast recycling.
4. TTL metering requires dedicated module.
5. Opus packs require modification for use with Varipuls
6. Remote control with Servor 3 transmitter
7. Infrared triggering with IRI, IRS, IRS-E units.

T0.5 is considered nominal flash duration. It measures the duration of the flash above 50% power. It is the standard used by most manufacturers; use it to compare Broncolor to other packs. T 0.1 is total flash duration. Because it measures the flash above 10% power, taking into account the trailing end of the flash curve, it is an accurate representation of actual motion stopping capability. T 0.1 measurements are virtually equivalent to camera shutter speeds.

The Flashman series of compact, lightweight power packs are perfectly suited for both studio and location work. Power settings are adjusted in 1/3 stop increments with the touch of a safe, low-voltage control pad.

You can set the 250W modeling lights to full or automatic proportional power levels for easy focusing and accurate visualization of the final image. True 100% charge is indicated by both audible and visible signals.

The built-in slave receives both white light and infrared signals from Broncolor triggers and meters. It can be turned off for use with a sync cable.

Flashman packs are compatible with most Pulso and Universal system lampheads and accessories, including a full line of reflectors, diffusers and light control devices.

In addition to a one-stop gain in output over the Flashman I, the Flashman 2 pack is equipped with an internal discharge device which eliminates flashing when power is reduced. Because of its higher capacity the use of fan-cooled Pulso 2 heads is recommended.

broncolor
Flashman
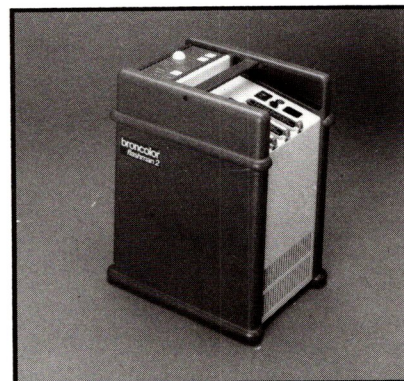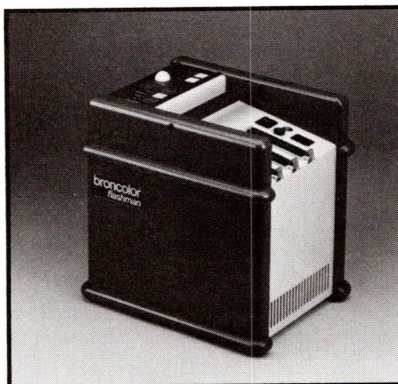
	Flashman	Flashman 2
Capacity	950Ws	1900Ws
Output*	f/45 2/3	f/64 2/3
Flash Duration t 0.5**	1/1000 - 1/2700	1/500-1/1350
Flash Duration t 0.1**	1/300-1/820	1/150-1/400
100% Recycle Time	0.5-1.0 sec.	1.2-2.4 sec.
Triggering	Infrared / Sync Cable / Photocell	
Adjustment Range	2 Stops in 1/3 stop increments	
Modeling Light	250 W proportional to flash power	
Distribution	Symmetrical	Symmetrical
Lamphead Outlets	3	3
Dimensions	11x8x11	11x8x14
Weight	15 lb.	21 lb.
Catalog Number	**10-1010**	**10-1012**
Price	**$1790.00**	**$2790.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
** t 0.1 is a measure of flash duration which is comparable to actual shutter speeds.

The Flashman Packages

These packages provide the lightweight Flashman Power Pack and two Flashman lampheads complete with flashtube, EHT modeling lamp, and reflector. The reflector package features the umbrella / Flashman reflector and the P70 Pulso reflector. You can easily add accessories such as barn doors to the P70 reflector. The portrait package features an umbrella for fill and the Pulsoflex 80 as a main light. All you add are stands (pg. 68) and an IRS infrared transmitter for cordless triggering (pg. 67).

Flashman Two Head Portrait Package

Includes:

1	10-1010	Flashman Power Pack
1	10-1120	ATA case for Flashman & 2 heads
2	12-0001	Flashman lampheads with flashtube
1	12-0040	Umbrella / Flashman refl.
1	12-0273	Pulso umbrella bracket
1	12-0708	Pulsoflex (32 x 32 In)
1	12-2007	40" White Umbrella

Purchased individually: $4174.00
Special Package Price:
10-2026 .... **$3760.00**

Flashman Two Head Reflector Package

Includes:

1	10-1010	Flashman Power Pack
1	10-1120	ATA Case for Flashman and 2 heads
2	12-0001	Flashman lampheads with flashtube
1	12-0040	Umbrella / Flashman reflector
1	12-0070	P70 reflector

Purchased individually: $3669.00
Special Package Price:
10-2030 .... **$3300.00**

Flashman 2 Two Head Package

Includes:

1	10-1012	Flashman 2 Power Pack
2	12-0002	Pulso 2 Lampheads
2	12-0070	P70 Reflectors
1	10-1120	ATA Case

Purchased Individually: $5019.00
Special Package Price:
10-2032 .... **$4520.00**

Opus Power Packs

The new Opus power packs combine light weight and low cost with many of Pulso's most advanced features.

Its extremely compact design makes Opus an ideal location unit. Because the packs are compatible with the Pulso accessory line, there is no compromise in terms of flexibility.

Opus packs are offered in 1600 and 3200Ws versions, providing the same output as equivalent Pulso packs. All pack functions are controlled by Broncolor's familiar electronic touchpad. Functions of these microprocessor-controlled packs include:

- Extremely compact size and light weight
- Same output as corresponding Pulso Packs
- 4-stop range
- 1/10 or 1/3 stop increments
- 3 lamphead connectors
- Trigger Delay
- Flash Sequence
- "Ping Pong" alternate triggering
- Multiple pack stroboscopic mode
- Infrared control of power levels with FCM Meter
- Full remote capability with Servor 3
- Built-in infrared / white light slave
- Audible ready signal
- Wildcard function allows future program expansion
- Compatible with all existing Pulso / Flashman accessories

Available Summer 1990

|	*opus 2*	*opus 4*
Capacity	1600Ws	3200Ws
Output*	f/64 1/3	f/90 1/3
Flash Duration t 0.1**	1/230-1/530	1/120-1/270
t 0.5	1/700-1/1700	1/350-1/850
100% Recycle Time	0.5-1.9 sec.	0.7-3.6 sec.
Triggering	IR/Cord/Cell	IR/Cord/Cell
Adjustment Range	4 stops in 1/10 or 1/3 stop increments	
Modeling Light	250 W proportional to flash power	
Distribution	Symm.	Symm.
Lamphead Outlets	3	3
Special Features	Flash Sequence, Trigger Delay, "Ping Pong" Alternating Release, Sequence Shift, 8 Servor Remote Addresses, 2 Studio and 2 IR Channels, Buzzer on/off	
Power Requirements	110V/15A	110V/15A
Dimensions	7x11x11	7x11x14
Weight	16 lb.	23 lb.
Catalog Number	**10-0020**	**10-0040**
Price	**$3200.00**	**$5100.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
** t 0.1 is a measure of flash duration which is comparable to actual shutter speeds. The more common t 0.5 measurement is approximately 3 times faster, but does not accurately reflect motion-stopping capability.

The Opus A2 and A4 are even more versatile, low-cost asymmetric versions of the Opus 2 and 4.
By splitting the capacitors into two separate banks, you can vary the output on each channel independently of the other for asymmetric control accurate to 1/10 f-stop.

Available Summer 1990
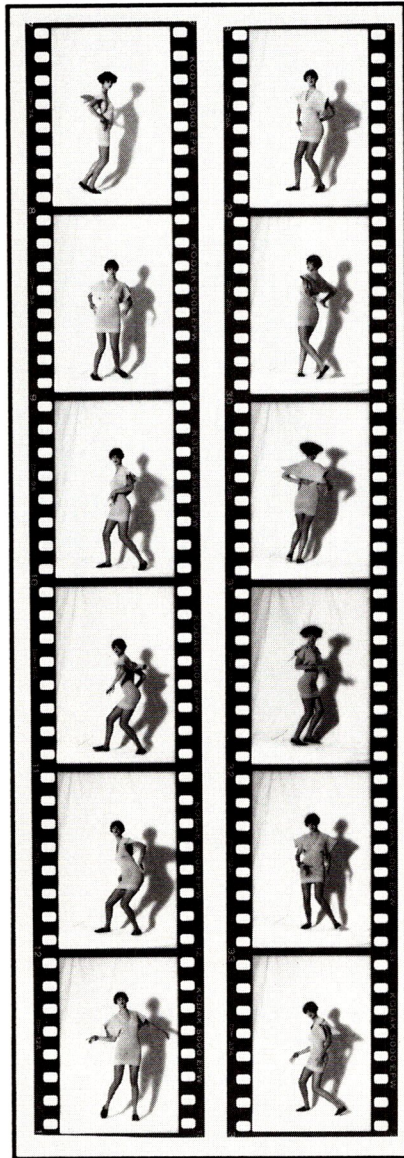
broncolor
Opus

Multiple Opus, Opus A or Pulso A packs in strobo-scopic mode will give you near-instantaneous recycle time to keep up with all the action

	opus A2	opus A4
Capacity	1600Ws	3200Ws
Output*	f/64 1/3	f/90 1/3
Flash Duration t 0.1**	1/230-1/530	1/120-1/270
t 0.5	1/700-1/1700	1/350-1/850
100% Recycle Time	0.5-1.9 sec.	0.7-3.6 sec.
Triggering	IR/Cord/Cell	IR/Cord/Cell
Adjustment Range	4 stops in 1/10 or 1/3 stop increments	
Modeling Light	250 W proportional to flash power	
Distribution	Asymm/Symm	Asymm/Symm
Lamphead Outlets	3	3
Special Features	Flash Sequence, Trigger Delay, "Ping Pong" Alternating Release, Sequence Shift, 8 Servor Remote Addresses, 2 Studio and 2 IR Channels, Buzzer on/off	
Power Requirements	110V/15A	110V/15A
Dimensions	7x11x11	7x11x14
Weight	16 lb	23 lb.
Catalog Number	**10-0025**	**10-0045**
Price	**$3900.00**	**$5900.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
** t 0.1 is a measure of flash duration which is comparable to actual shutter speeds. The more common t 0.5 measurement is approximately 3 times faster, but does not accurately reflect motion-stopping capability.
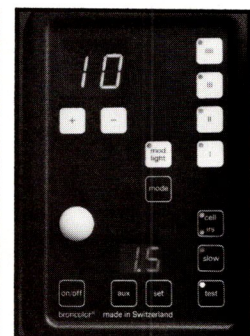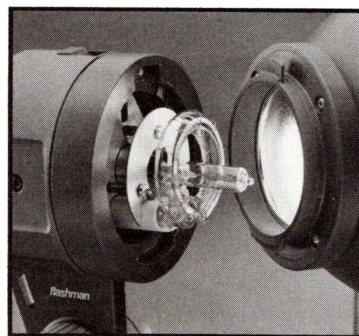
45

Pulso Power Packs

- 1600, 3200 and 6400 Ws models
- Fully microprocessor controlled
- Safe, low-voltage touchpad controls
- 4 f-stop range controlled in 1/10 and 1/3 f-stop increments
- 4 protected lamphead connections
- Lamphead outlets can be independently switched
- Fully proportional modeling light
- True 100% recharge
- Power stabilized to ± 1%
- 3 sync modes - infrared, white light and cable
- Full infrared remote control with Servor 3 transmitter
- Infrared power adjustment with FCM Flashmeter
- Programmable features include multiple flash, delay flash and flash count.

Broncolor Pulso packs are the center of a state-of-the-art, microprocessor controlled system. Their efficient design delivers more actual output per watt-second with an incredible degree of accuracy and repeatability.

In addition to performance, Pulso packs are engineered with safety in mind. The two-step lamphead connectors with fireproof plugs and recessed high-voltage contacts ensure safe operaton, and each lamphead is coded to prevent overloading. The control pad is completely isolated from high-voltage current, making the Pulso packs extremely safe to operate.

	pulso2	*pulso4*	*pulso8*
Capacity	1600Ws	3200Ws	6400Ws
Output*	f/64 1/3	f/90 1/3	f/128 1/3
Flash Duration t 0.1**	1/180-1/600	1/90-1/300	1/70-1/240
t 0.5	1/600-1/2000	1/300-1/1000	1/230-1/800
100% Recycle Time	0.5-1.9 sec.	0.7-3.6 sec.	0.9-4.8 sec.
Triggering	IR/Cord/Cell	IR/Cord/Cell	IR/Cord/Cell
Adjustment Range	4 Stops in 1/10 or 1/3 stop increments		
Modeling Light	250 W proportional to flash power		650W proportional
Distribution	Symm.	Symm.	Symm.
Lamphead Outlets	4	4	4
Special Features	Flash Sequence (1-50), Trigger Delay (0.1-9.9 sec.), Flash Counter (1-99), 8 Servor Remote Addresses, 2 Studio and 2 IR Channels, Buzzer on/off		
Power Requirements	110V/15A	110V/15A	220/240V / 10A
Dimensions	8x13x14	8x13x16	8x13x21
Weight	27 lb.	33 lb.	46 lb.
Catalog Number	**10-1020**	**10-1040**	**10-1080**
Price	**$4300.00**	**$6400.00**	**$8800.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
** t 0.1 is a measure of flash duration which is comparable to actual shutter speeds. The more common t 0.5 measurement is approximately 3 times faster, but does not accurately reflect motion-stopping capability.

Pulso "A" Power Packs

The Pulso "A" Series is the ultimate step in the technologically advanced Broncolor Pulso line. The "A" Series maintains all of the features of the Pulso while adding many new functions, including:

- Asymmetric Power Distribution

- Selectable Flash Duration from 1/125 to 1/6000 sec.

- Consistent color temperature control over a 6 f-stop range on the asymmetric connections.

- Trigger delay programmable to 1/100 of a second for flash sequences with multiple packs.

- Flash duration can be displayed at any time.

- Infrared control of power levels with FCM meter.

- Infrared control of color temperature with FCC meter.

- "Ping Pong" function allows use of motor drives by alternately firing two power packs

- High-speed stroboscopic capability

- Programmable "*" function allows additional features to be added so your pack will never be outdated.

- All functions can be controlled remotely with the Servor 3.

- Fully compatible with the existing line of Pulso and Flashman power packs and accessories.

- *New* Dedicated Flash capability with selected cameras.

	pulso A2	*pulso A4*
Capacity	1600Ws	3200Ws
Output*	f/64 1/3	f/90 1/3
Flash Duration t 0.1**	1/250-1/6000	1/125-1/6000
100% Recycle Time	0.2-1.9 sec.	0.3-3.6 sec.
Triggering	IR/Cord/Cell	IR/Cord/Cell
Adjustment Range	Up to 6 stops in 1/10 or 1/3 stop increments	
Modeling Light	250 W, proportional to flash power	
Distribution	Asym/Symm	Asym/Symm
Lamphead Outlets	4	4
Special Features	All Pulso 2/4/8 Features plus TTL Metering, Stroboscopic Mode, Flash Duration Control, "Flip Flop" multi-pack sync	
Power Requirements	110v/15A	110v/15A
Dimensions	8x13x14	8x13x16
Weight	30 lb.	36 lb.
Catalog Number	**10-1025**	**10-1045**
Price	**$5700.00**	**$7900.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
** t 0.1 is a measure of flash duration which is comparable to actual shutter speeds.

Pulso "A" lets you set up shots like this in a flash.

W̲e were doing a shot that needed 32 strobe pops on the background. It was 7:30 at night and we were all pretty tired and hungry. We ordered out for some food and let our Pulso "A" pack take care of the multiple pops while we had dinner.

—Art Zippel, Santa Ana, CA

broncolor
Pulso
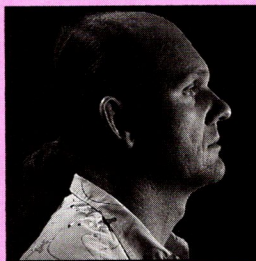
Minipuls and Compuls Compact Units

The **Minipuls 40 and 80** are the smallest, most portable units compatible with the Pulso accessory line. If you already own Pulso or Flashman accessories and you need portable, lightweight units for location work, Minipuls is the ideal solution.

The 300Ws Minipuls 40 and the 600Ws Minipuls 80 have a 3 stop output range, adjustable in 1/3 stop increments. The units feature t0.1 flash durations (equivalent to camera shutter speeds) of 1/400 and 1/250 sec. respectively.

Both Minipuls units feature self-seeking multi-voltage power — Just plug them in anywhere in the world and they're ready to go.

Like Pulso and Flashman, flash voltage of the Minipuls is stabilized to within ± 1% of the selected level for consistent output, time after time. And, Minipuls is fitted with the same 250W halogen modeling lamp used by the Pulso/Flashman lampbases, so there's no sacrifice in terms of ease of use.

The Minipuls units can be triggered by sync cord, infrared sync or white light slave. Both units accept a cable remote to control all functions on distant or hard to reach strobes.

Minipuls 80

The Minipuls 40 and 80 come complete with flashtube, modeling light, sync cable, power cord and protection cap.

Available Summer 1991
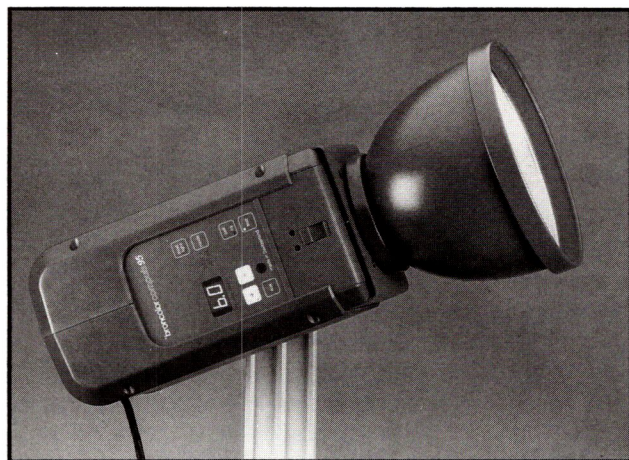
Compuls 95

The **Compuls** units combine the convenience of a self-powered unit with the microprocessor control and wide accessory base of the Pulso series.

Their power levels are comparable with stand-alone power packs, and their all-in-one design makes them even more efficient than power pack/lamphead units.

Like Pulso, Compuls has a 4-stop range in 1/10 or 1/3 stop increments, infrared triggering, sequence and delay functions and a switchable audible ready signal.

Compuls units can be used with an optional cable remote which controls all touchpad functions (See pg. 49.)

Compuls units include flashtube, modeling lamp, sync cable and protection cap. Optional glass protection dome is available, see page 69.

	minipuls 40	minipuls 80	compuls 95	compuls 165
Capacity	300Ws	600Ws	950Ws	1650Ws
Output*	f/32	f/45	f/45 2/3	f/64 1/3
Flash Duration t 0.5	1/1250	1/800	1/1000	1/600
100% Recycle Time	0.4-0.7	0.5-1.0	0.5-1.5sec.	0.6-2.5 sec.
Triggering	IR/Cord/Cell	IR/Cord/Cell	IR/Cord/Cell	IR/Cord/Cell
Adjustment Range	3 Stops in 1/3 stop increments		4 Stops in 1/10 stop increments	
Modeling Light	250W	250W	250 W	650 w
	Modeling Lights on all units proportional to flash power			
Special Features			Multiple and Delay Flash	
Power Requirements	Automatic Multi-Voltage		110v/15A	220V/10A
Dimensions	5x7x15	5x7x15	6x9x7	16x9x7
Weight	7 lb.	8 lb.	14 lb.	16 lb.
Catalog Number	**11-1040**	**11-1080**	**11-1025**	**11-1010**
Price	**$1150.00**	**$1450.00**	**$2980.00**	**$3100.00**

* Output measured at 6 1/2 feet (2 meters) at ISO 100 with a P70 reflector
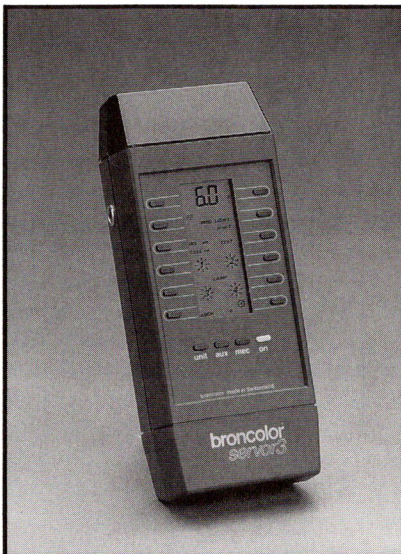
Servor 3 Remote Control

The Servor 3 is an intelligent remote control unit which lets you access all the functions of your Pulso, Pulso "A" and Opus packs and your motorized ceiling rail via an infrared link.

The graphic LCD display tells you the status of each pack and allows you to change power levels, turn on lampheads and modeling lights, even access the auxiliary functions of your pack.

By setting up to 8 packs to different Servor addresses, you can control each one individually. Or, set packs to the same address and control several of them at once. The unit can be programmed to know which types of packs are on each channel, so it can present you with the proper range of functions.

If you have a light bank on a motorized rail system, you can use the Ser-

vor 3 to control vertical and horizontal movement as well as tilt and rotation.
16-3020 .... **$1180.00**

Case

For packs or lampheads.
10-1110 .... **$299.00**

ATA Case

For Flashman and two heads
10-1120 .... **$349.00**

Casters

For Flashman Case (10-1120).
10-1122 .... **$25.00**
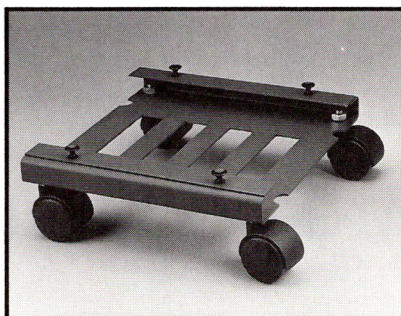
Studio Dolly for Pulso

Attaches easily to any Pulso or Flashman power pack, allowing the pack to roll along the floor. A special adjustable lip keeps the dolly attached to the pack even when it is lifted.
13-4040 .... **$195.00**

Cable Remote Control

To Compuls 165 and 95.
11-1022 .... **$194.00**

Varipuls

Varipuls allows precise, repeatable adjustment of the flash duration of the corresponding lamphead from 1/125 up to 1/5000 of a second. It is compatible with the Flashman 1 and 2, Pulso 2 and 4 and Opus power packs, and installs easily between the powerpack and one corresponding lamphead.

Varipuls also allows asymmetric adjustment of the power output of the corresponding lamphead. It controls the flash output and color temperature in combination with the setting on the power packs to maintain a consistent color temperature over a wide range of power levels. (Pulso and Opus packs require modification for use with Varipuls.)
12-0014 .... **$1599.00**

Holder for Flashman to Stand

13-4035 .... **$170.00**

broncolor
Compact Units & System Accessories

Making the Right Lighting Decisions

In today's professional environment, it's fair to say that the choice of lighting is one of the most important decisions a photographer can make. Lighting, after all, is the ethereal ingredient that can separate an average picture from an inspired one. In today's competitive industry a photographer could hardly afford to ignore such a decisive factor. Efficiency and performance are the keys to success.

Watt-Seconds Don't Guarantee Efficiency

Unfortunately, there are no true standards of comparison for lighting units. Many photographers rely on watt-second ratings, comparing the amount of watt-seconds versus dollars spent. The watt-second rating itself, however, is of little value in making a buying decision.

Watt-second rating is by no means a measure of actual light output. It is definitely *not* an indication of what f/stop your flashmeter will read. Put another way: If one power supply is rated at twice the watt-seconds of another, it does not mean that the first is putting out twice the light of the second.

Think of this in terms of automotive performance. A European sports car, because of its light weight and efficient engine, will outperform a bulky American sedan even though the latter has twice the horsepower.

The efficiency of a system determines its performance value. While one power supply might start out with a higher capacity rating, it may lose much of its power in the chain that links capacitors to connectors, cabling, flashtubes and reflectors. Losses of this type are not minor and weigh heavily on a system's efficiency.

Choosing the Right Unit

Instead of evaluating a unit by watt-seconds versus dollars spent, try comparing output f/stop with watt-seconds. The results can be startling. That "bargain" unit which offers seemingly staggering power for the dollar, may in fact be so inefficient that two packs are required to acheive the desired f/stop. What's worse, you may be sacrificing overall reliability and operating features for the sake of a bogus bargain.

How, then, do you judge the quality of a unit? Easy! Make a simple test before buying: Bring your flashmeter to your local professional dealer and set it ten feet in front of a flash head with a standard 55-60° reflector. Set the power unit to a nominal setting and trigger the flash. Measure the f/stop using, say, ASA 100 as a standard setting. Compare several different units this way, being sure to use the same power setting. It's not uncommon to find readings that vary by 1 or 2 f/stops from power supplies of identically-rated watt-seconds.

Once you understand that true value is measured by f/stop compared to cost, you can easily determine whether you're getting a bargain or not. You'll get the light output you need and gain real advantages in reliability, system integration and technological performance.

Pulso Accessory Compatibility

Accessories	Lampheads				
	Pulso 2 / F2	Pulso 4 / F4	Pulso 8	Pulso Twin	Flashman
P45 Reflector	Yes	Yes	No	No	Yes
P50 Reflector	No	No	Yes	Yes	No
P65 Reflector	Yes[2]	Yes[2]	Standard	Yes	Yes[2]
P70 Reflector	Standard	Standard	Yes	Yes	Yes
Zoom Reflector	Yes	Yes	Yes	Yes	Yes
P120 Reflector	Yes	Yes	Yes	Yes	Yes
Conic Snoot	Yes	Yes	Yes	Yes	Yes
Pulsoflex 50, 35x60, 30x110, 40x155	Yes	Yes	Yes	Yes	No
Pulsoflex 80, 110, 150, 80x140	Yes	Yes	Yes	Yes	Yes
Pulsoflex 55x95	Yes	Yes	Yes	Yes	Yes[3]
Umb. / Flashman	Yes	Yes	No	No	Standard
New Umbrella	Yes[4]	Yes[4]	No	No	Yes[4]

Footnotes:
2. Can be used, but modeling light does not correspond to flash.
3. Can be used; thermo protection turns off modeling lamp after 20-30 minutes
4. Must be used with new umbrella bracket on F2 and F4 focusing lampbases.

Electronic Flash Duration

We all know that the flash during its duration does not produce a constant intensity but that this intensity changes with time, corresponding to the curve shown below. The start of the flash is very intense and reached maximum power quickly, after which it trails off to zero.

This curve can best be explained by comparing it to a water barrel which is drained by a faucet at the bottom. If the barrel is full, the interior pressure is high and the water drains quickly. As it drains, the water level in the barrel drops and the pressure drops accordingly, so that the speed of the water flowing out decreases continuously.

The energy in the capacitors of a flash system acts similarly. At the start of a flash, the capacitors are fully charged and the discharge current (which corresponds to the flow speed of the water in our example) reaches its highest value. During discharge, the voltage at the capacitor drops, and both current and light drop along with it.

Because the curve has no specifically defined end, artificial definitions are required in order to compare curves of different durations with each other. ISO Standard No. 2827 sets two values to specify the discharge time:

Effective flash duration t0.5 specified on the basis of the definitions of the shutter speeds, which describes the time between reaching half of the peak intensity to falling back to half of peak intensity again.

Total flash duration t0.1 which indicates the corresponding time between the 10% points of the curve.

T0.5 is the one used traditionally and is normally stated in brochures and data sheets. However, if motion is to be frozen with short flashes, we must consider that after the indicated time t0.5, the flash still illuminates with half its intensity. For sharpness, t0.5 cannot be compared with shutter speeds of an identical duration. In this case, t0.1 must be used. If t0.1 is not listed, multiplying t 0.5 x 3 is a good rule of thumb.
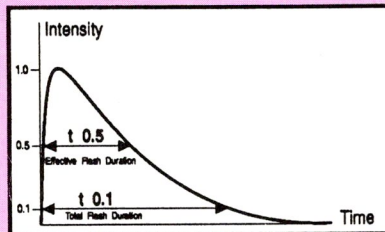
What can a photographer do if, after all these calculations, he realizes that the expected flash duration will not produce sufficient sharpness for the object he intends to photograph? Let us recall the water barrel: If two drain valves are opened at the same time, the barrel is drained in half the time. The very same thing happens if two lamp heads, instead of one lamp head, are attached to the same capacitor group of one flash unit:

Double the # of lamp heads = half the flash duration.

Shortening duration by reducing flash power works only in some cases. It does hold true if the energy reduction in the power pack is obtained by shutting off the capacitors not required. However, since this is feasible only in very large increments, this method is used only for simple units.

The most modern flash units, however, use a variable voltage at the flash capacitors to set the quantity of light. This allows a very precise variation of the quantity of light. For these units, the reduction of energy does not have any noticeable effect on the flash duration.

Where sharpness is lacking, it does not help to reduce the flash duration by, say, 20%. A substantial improvement in the sharpness of the picture always requires halving or quartering the flash duration. In addition, it is interesting to see that the lack of sharpness in the case of flash lighting is not symmetrical. The asymmetric shape of the flash curve displays a very low intensity towards the end. This suggests the possibility of trying to simply cut off this tail which is responsible for the lack of sharpness.

Broncolor offers several ways to interrupt the discharge of the flash via an electronic switch at the desired time. The Pulso "A" power packs have built-in circuitry to control flash duration on two lampheads. For other Pulso and Flashman packs, you can use the Varipuls unit. This accessory is connected between power pack and lamp head to control flash duration and provide asymmetric distribution.

Intensity / t 0.5 / Effective Flash Duration / t 0.1 / Total Flash Duration / Time
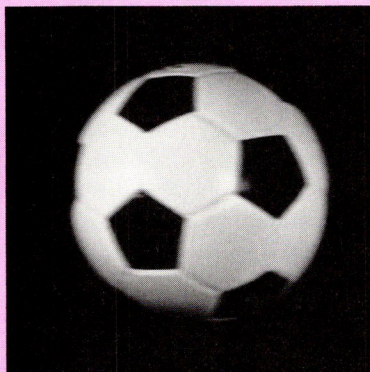
Camera Shutter, 1/500 sec.
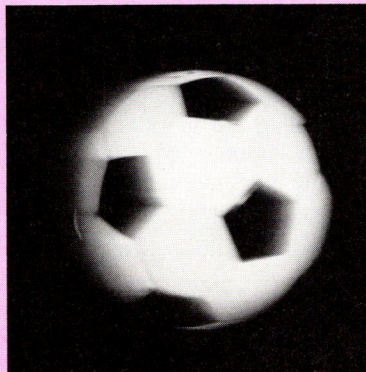
1/500 sec. at t 0.5
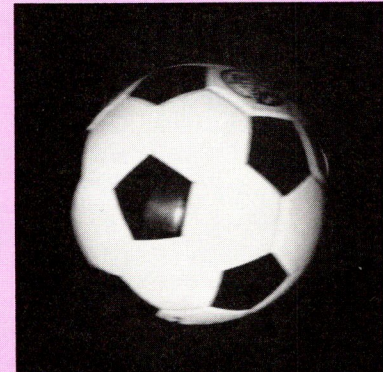
1/500 sec. at t 0.1

Pulso / Flashman Lampbases

Flashman Lampbase
950 Ws, 110V 60Hz

A convection-cooled head with 16' lamphead cable, matching the design of the Pulso series lampbases. Includes protection cap, modeling light (15-2001), and flashtube (15-0002).

12-0001 .... $660.00

Pulso 2 Lampbase
1600 Ws max., 110V 60Hz

Fan-cooled lampbase with 16' lamphead cable. Includes protection cap, flash tube (15-0002), modeling lamp (15-2001).

12-0002 .... $790.00

New! **Pulso 2 Lampbase with 32' Cable**
12-0006 .... $915.00

Protection Glass for Pulso 2 (uncoated)
15-0022 .... $95.00

Pulso 4 Lampbase
3200Ws max., 110V 60Hz.

Fan-cooled lampbase with 16' lamphead cable. Includes protection cap, flashtube (15-0004), modeling lamp (15-2001) and protection glass (15-0026).

12-0004 .... $1150.00

New! **Pulso 4 Lampbase with 32' Cable**
12-0009 .... $1275.00

Pulso 8 Lampbase
6400Ws max., 208-240V 60Hz

Fan-cooled lampbase with 24' lamphead cable. Includes protection cap, flash tube (15-1005) and modeling lamp (15-2005).

12-0008 .... $1590.00

Lampbases for the Hazylight are detailed on page 60.
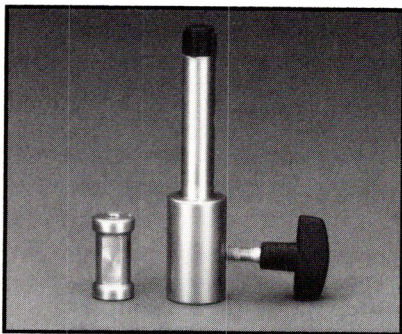
Broncolor Adapter
To put Pulso/Flashman lamp heads on Century or Bogen 5/8" stands.

13-3008 .... $14.00
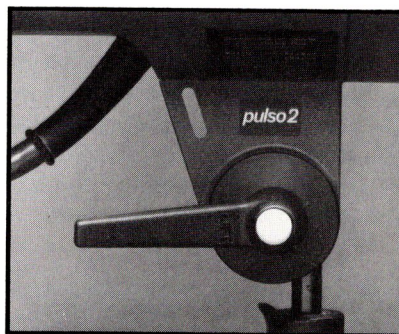
Locking Lever
Lever handles are now standard on all Broncolor lampheads. Older heads can easily be converted by replacing the blue knob with this handle.

12-0013 .... $15.00
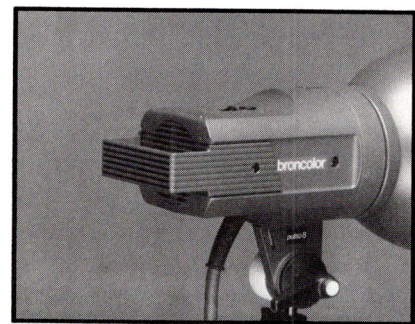
Handle for Lamphead
New accessory handle for all Pulso and Flashman lampbases makes precise adjustment of the heads faster and easier.

12-0012 .... $18.00

Orders • Information •1-(800) 456-0203 • Financing • Workshops
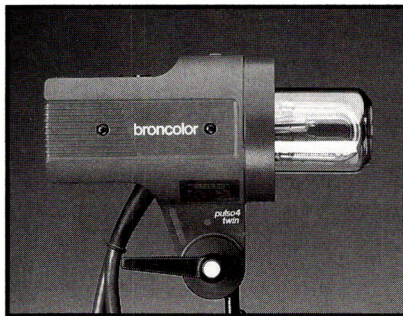
Pulso Twin Lampbase 2
2x1600Ws , 110V 60Hz
Allows you to connect two power packs to one head for up to 3200Ws of total output, or to provide asymmetric distribution when used along with a standard lamphead.

Fan-cooled lampbase includes protection cap, flash tube (15-0011) and modeling lamp (15-2001).
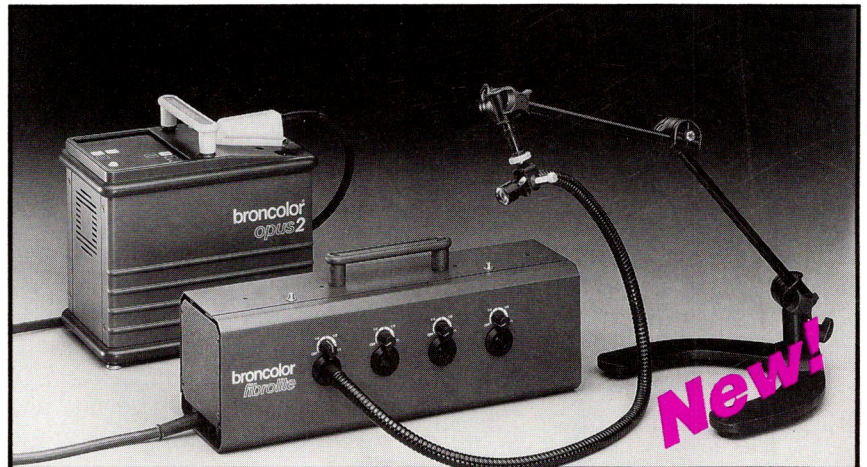
12-0011 .... $1490.00

Pulso Twin Lampbase 4
2x3200Ws, 110V60Hz
As above, but can handle 2 Pulso 4/A4 packs for up to 6400Ws of power. Fan cooled, includes protection cap, flash tube (15-0012) and modeling lamp (15-2001).

12-0016 .... $1650.00

Fibrolite
The 3200Ws Fibrolite provides **two to three times more light** than other fiber optic systems. It lets you use up to four fiber optic guides to place light precisely where you need it. Light small objects with a combination of accuracy and power never before possible, or highlight important points in a larger composition.

Each of the 39" fiber optic cables transmits light without heat, making it safe to use at any distance. Individual outlet controls let you vary the output of each guide independently over a 3 f-stop range. A cooling fan is built in for trouble-free multiple exposures.

The Fibrolite can be used with Pulso 2/A2. 4/A4 or any Flashman or Opus power pack. It is compatible with existing optical fibers and accessories from the Impact Fibro system.

12-3006 .... $1650.00

Available Summer 1991

The new focusing lampbases from Broncolor allow adjustment of the light angle from 60 - 90° via a convenient side-mounted dial. This provides greater control in direct light situations, with or without the use of honeycombs and other light control accessories.

The fan-cooled F2 and F4 lampbases with their long 16' lamphead cables, also feature a new built-in umbrella bracket. The umbrella reflector (12-0075) is required for umbrellas when used with the focusing heads.

Focusing Lampbase F2
1600 Ws max., 110V 60Hz.
Includes protection cap, flashtube (15-0002) and modeling lamp (15-2001)

12-0003 .... $890.00

Focusing Lampbase F4
3200Ws max., 110V 60Hz
Includes protection cap, flashtube (15-0004), modeling lamp (15-2001) and protection glass (15-0028)

12-0005 .... $1250.00

F2 Lampbase with 32' Cable
12-0007 .... $1015.00

F4 Lampbase with 32' Cable
12-0010 .... $1375.00

P70 Pulso Reflector

f/90 1/3 at 6-1/2 ft. (3200Ws, 100 ISO)
Standard reflector for Pulso 2 and 4 lampbase used as umbrella reflector. Provides 70° coverage. Can also be used with Pulso 8 lampbase.
12-0070 .... $150.00

Umbrella / Flashman Reflector

f/45 2/3 at 6-1/2 ft. (950Ws, 100 ISO)
Designed as an economy or location reflector for the Flashman lampbase. Can also be used as an umbrella reflector. This reflector does not accept barn doors or accessories, and will not accept protection domes when used with Pulso 2 or 4 lampheads. Provides 70° coverage.
12-0040 .... $60.00

P65 Pulso Reflector

f/128 1/3 at 6-1/2 ft., (6400Ws, 100 ISO)
Normal reflector for Pulso 8 lampbase. Can also be used with Pulso lampbase 2 & 4. Provides 65° coverage.
12-0065 .... $171.00

P50 Pulso Reflector

f/128 1/3 at 6-1/2 ft. (6400Ws, 100 ISO)
Narrow Angle for Pulso 8 and Twin
12-0050 .... $390.00

Softlight Reflector for Pulso

f/45 2/3 at 6 1/2 ft. (3200Ws, 100 ISO)
Broad, indirect light for portraiture and other applications where softer light is desired.
12-0080 .... $320.00

Honeycomb to Softlight
12-0180 .... $135.00

Diffuser to Softlight
12-0380 .... $190.00
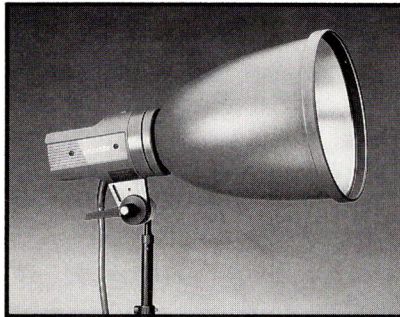
P45 Pulso Narrow Angle Reflector

f/128 at 6-1/2 ft. (3200Ws, 100 ISO)
An extra-deep parabolic reflector which concentrates output into a 45° coverage angle for increased efficiency over a smaller area.
12-0045 .... $272.00
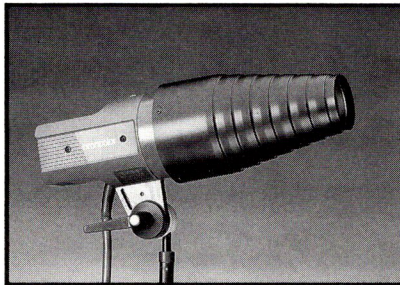
Pulso Conic Snoot

f/32 1/3 at 6 1/2 ft (3200Ws, 100 ISO)
Provides a narrow 20° of direct illuminaiton.
12-0073 .... $96.00
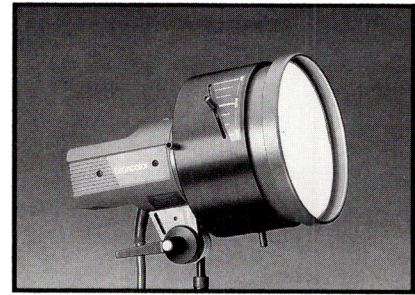
Zoom Reflector P60-90

f/90 1/3 to f/64 1/3 (3200Ws, 100 ISO)
The zoom reflector complements Broncolor's already substantial line of parabolic reflectors. It allows you to adjust the light angle from 60° to 90°, with a one f-stop difference between wide and narrow angles. The lighting effect is similar to the F2 and F4 focusing lampbases with standard reflector. It accepts all P70 accessories, including barn doors and honeycombs.

The P60-90 can be used with the Flashman, Pulso 2, 4, and 8 lampbases.
12-0090 .... $360.00

P120 Pulso W/A Reflector

f/45 2/3 at 6-1/2 ft. (3200 Ws, 100 ISO)
Provides 120° coverage.
12-0120 .... $76.00

Adapter for Universal Reflector to Pulso Heads

Allows the use of universal reflectors on Pulso lampbases.
12-0999 .... $85.00

New Umbrella Reflector

For use with the F2 and F4 focusing lampbases, this reflector must be used with the new-style integrated umbrella bracket.
12-0075 .... $110.00

Accessories for Lampheads and Reflectors

Barn Doors

Barn doors are used to control the coverage of lights by blocking light from falling on certain areas of the subject. They can be used to screen backgrounds, control reflections or narrow the lighting angle of a particular reflector.

Broncolor barn doors are unique in that their design does not allow stray light to spill out between the wings and the mounting ring or between the ring and the flash head. They also feature a built-in holder for filters and gels.

For Use With	Wings	Cat#	Price
P70	4	12-0271	$250.00
P70	2	12-0270	$185.00
P65/P45	4	12-0266	$400.00
Hazy, Strip, Cuml	2	12-4016	$570.00
Mini-Hazylight	2	12-0469	$275.00

Filters and Diffusers for Barn Doors

Broncolor filters are designed for use with Pulso barn doors. The 12 colored filters let you add a splash of color to your images. The grey neutral density and correction filters allow you to make corrections in exposure and color cast at the light source.

Type	For use with	Set of	Product #	Price
Color	P65/P45	12	12-0365	$130.00
Color	P70	12	12-0370	$100.00
Grey	P65/P45	12	12-0368	$130.00
Grey	P70	12	12-0373	$110.00
Opal Diffusor	P65/P45	12	12-0366	$ 75.00
Opal Diffusor	P70	12	12-0371	$ 60.00

Honeycomb Spot
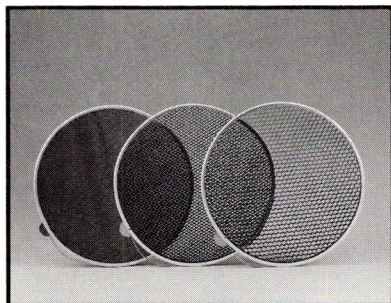
Honeycombs narrow the lighting angle of the standard reflector and produce dramatic, contrasty lighting. Their lighting effect falls off sharply from the center outward, the fine mesh giving the smallest circle of illumination. The limit of the lighting angle depends on the size of the meshing.

For Use With	Set of	Product #	Price
P70	3	12-0170	$230.00
P65/P45	3	12-0165	$360.00
Softlight Reflector	1	12-0180	$135.00
Mini-Hazylight	1	12-0468	$460.00
Hazylight	1	12-4009	$690.00
Hazylight 2 / Soft	1	12-0393	$690.00
Striplight	1	12-6022	$660.00
Mini-Cumulite	1	12-2019	$530.00

To me there's no finer an instrument than the Sinar p2 and the Broncolor Pulso "A." The precision of the camera and consistency and control of the packs means that what you see is what you get.

Ad photography is what I do for a living and my tools reflect the quality and creativity of my craft. The equipment has opened creative doors and turned me loose with flexibility.

—Harry Przekop
Chicago, IL

Pulsoflex Diffused Light Sources

The Broncolor Pulsoflexes are lightweight, portable lightbox reflectors which will attach to any Broncolor Pulso lamphead. More efficient than conventional umbrellas, the Pulsoflex provides soft, diffused, direct illumination, making it an excellent light source for almost any type of assignment.

The reflector can be used open, without the diffuser, with the secondary diffuser only, with the main diffuser only, or with both the main and secondary diffusers combined.
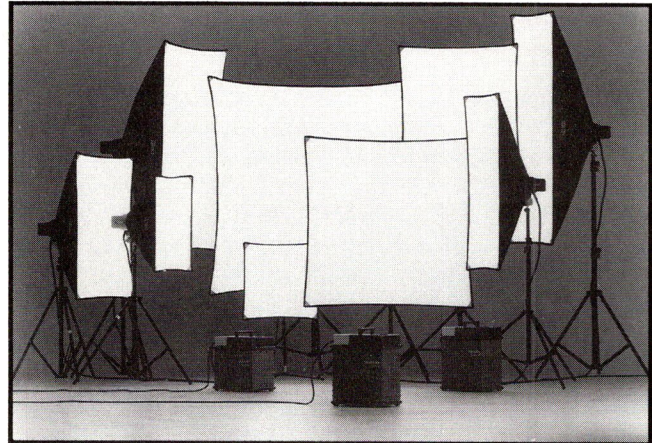
Pulsoflex Type	Product #	Price
50 x 50 cm (20" x 20")	12-0705	$320.00
80 x 80 cm (32" x 32")	12-0708	$425.00
Round Mask to 80 x 80	12-2012	$ 86.00
110 x 110 cm (43" x 43")	12-0711	$575.00
150 x 150 cm (59" x 59")	12-0715	$690.00
35 x 60 cm (14" x 24")	12-0720	$330.00

Pulsoflex Type	Product #	Price
55 x 95 cm (22" x 38")	12-0725	$400.00
80 x 140 cm (32" x 55")	12-0730	$550.00
30 x 110 cm (12" x 43")	12-0735	$400.00
40 x 155 cm (16" x 61")	12-0740	$480.00
Starflex D170 (68" hex)	12-0285	$840.00

Umbrellas
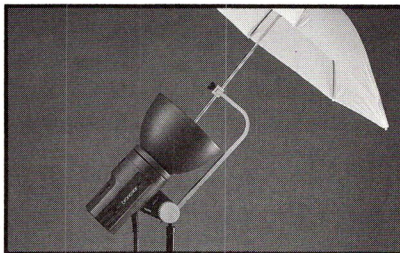
Umbrella Bracket for P70
12-0273 .... $70.00

Clamp Pulso to Jumbo Umbrella (replacement)
12-0279 .... $40.00

Type	Size	Product #	Price
Silver	32"	12-2006	$120.00
Silver	35"	17-2066	$125.00
Silver	40"	12-2009	$160.00
Jumbo Silver*	60" (156cm)	12-0277	$460.00
White	32"	17-2062	$107.00
White	40"	12-2007	$160.00
Jumbo White**	60" (156cm)	12-0275	$320.00
Transparent	35"	17-2064	$107.00
Transparent	40"	12-2008	$160.00

*f 45 at 6-1/2 ft., 3200 ws., 100 ISO
**f 32 2/3 at 6-1/2 ft., 3200Ws, 100 ISO

New Umbrella Bracket
For use with all Pulso/Flashman lampbases, replaces old-style umbrella bracket. Requires use of (12-0075).
12-0274 .... $90.00

New Umbrella Reflector
This reflector must be used with the new-style integrated umbrella bracket.
12-0075 .... $110.00

Umbrellas can be used with either P70 or Umbrella/Flashman reflectors. Requires umbrella bracket (12-0273) when used with lampheads other than the F2 and F4 focusing heads.

Power Pack / Reflector Combination Output Levels

Legend:
- ☐ Flashman
- ■ Pulso 2 / A2, Opus 2 / A2
- (light pink) Pulso 4 / A4, Opus 4 / A4
- (magenta) Pulso 8

Chart 1 — Vertical axis (Aperture): 128 2/3, 128 1/3, 128, 90 2/3, 90 1/3, 90, 64 2/3, 64 1/3, 64, 45 2/3, 45 1/3, 45, 32 2/3, 32 1/3, 32, 22 2/3, 22 1/3, 22, 16 2/3, 16 1/3, 16, 11 2/3, 11 1/3, 11

Reflector categories: P45, P65, P70, W.A. Ref. P120, Hazylight2, Hazy Soft, Mini-Cumi, Mini-Hazy, Fresnel Spot Attachment, Pulso Flooter, Pulsospot 4

Chart 2 — Vertical axis (Aperture): 128 2/3, 128 1/3, 128, 90 2/3, 90 1/3, 90, 64 2/3, 64 1/3, 64, 45 2/3, 45 1/3, 45, 32 2/3, 32 1/3, 32, 22 2/3, 22 1/3, 22, 16 2/3, 16 1/3, 16, 11 2/3, 11 1/3, 11

Reflector categories: Striplite, Pulsoflex 50x50, Pulsoflex 80x80, Pulsoflex 55x95 D170 150x150 110x110, Pulsoflex 40x155 35x60 30x110, Umbrella silver 82cm, Umbrella silver 102cm, Umbrella white 102cm, Umbrella transp. 102cm, Umbrella silver 156cm, Umbrella white 156cm

All readings taken at 2 meters (6 1/2 feet), ISO 100. All umbrellas measured with P70 reflector. All adjustable reflectors measured at their narrowest setting.

broncolor
System Components

57
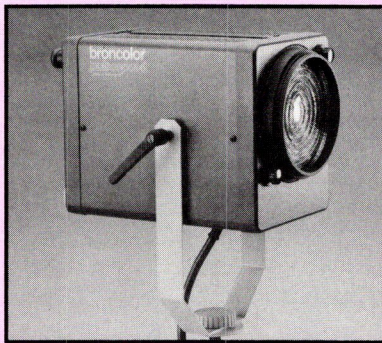
Pulsospot 4

f 90 at 6-1/2 ft., (3200Ws, 15°)
f 64 1/3 at 6-1/2 ft.,(3200Ws, 45°)
The Pulsospot 4 is a lamphead/lens assembly similar to the Broncolor Spotlight with Fresnel lens. Its projection angle is adjustable from 15 to 45°.

It is designed for applications where direct illumination with strong gradation is required, to bring out contrast and texture in objects, or to enhance certain areas with tightly controlled lighting.

Since the flashtube cannot be coated, the Fresnel lens has a 5300° K UV coating.

The Fresnel lens can be replaced with the Attachment Lens optical snoot, which projects a non-color fringing hard line circle. Six perforated masks with diameters from 10 to 60mm are included, and the attachment lens can also be fitted to project transparencies.

Weight 19 lb. Includes flashtube (15-1022) and modeling light (15-2001).
12-3022 .... **$2180.00**
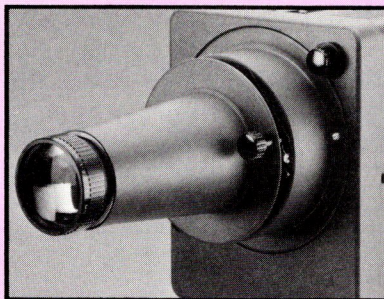
Attachment lens 150mm

f/32 1/3 @ 6 1/2 ft., 3200Ws, ISO 100
Projects a non-color fringing hard light circle (from 12.5 to 76 cm at 6 1/2 feet). Can project transparencies for rear or top projection with slide holders, below.
12-3024 .... **$1575.00**

Attachment lens 100mm

f/22 1/3 @ 6 1/2 ft., 3200Ws ISO 100
Projects a larger circle than the 150mm attachment lens (18.5 to 113cm at 6 1/2 feet)
12-3025 .... **$1470.00**

Slide Holder 6x6

13-3026 .... **$45.00**

Slide Holder 24x36

13-3028 .... **$45.00**

4 Part Slide Template

12-3030 .... **$69.00**

Barn Door to Pulsospot 4

12-4015 .... **$180.00**
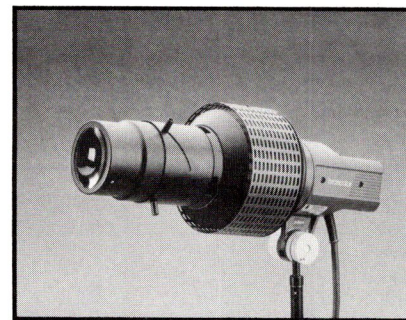
Broncolor Optical Spot

f/32 1/3 @ 6 1/2 ft. (ISO 100, 3200Ws)
This optical spotlight, similar to the Impact Impaspot, projects a non-color fringing hard light circle. It attaches to the Pulso 2/4 lamphead with the bayonet mount. Includes Diffusion Dome, and Aperture mask.
12-3031 .... **$1080.00**

Pulso Flooter

f 128 at 6 1/2 feet (ISO 100 at the 15 degree setting using a Pulso 4).
The Flooter is ideal for large sets such as cars and furniture, or in fashion photography when used with the honeycomb. It provides a broad light source which evokes fifties-style film lighting. Its performance is comparable to a theatrical spotlight with a Fresnel lens.

The Flooter can be used with any Pulso lampbase 2/4/8. The Fresnel lens has an active diameter of 340mm for extremely efficient light output. The light angle is adjustable within a range of 15-70 degrees. Weight 24 lb.
12-3035 .... **$1725.00**

Barn Door set To Flooter

12-3036 .... **$160.00**

Honeycomb To Flooter

12-3037 .... **$120.00**

Fresnel Spot Attachment

f 64 at 6 1/2 feet, (ISO 100 at 15 degrees using a Pulso 4)
An accessory to the Pulso 2 or 4 lampbases, giving Broncolor the largest selection of Fresnel and focusing spot lights available. The Fresnel lens has a diameter of 160mm (6.3 inches) and focuses from 15 to 35°. The focal length is 250mm and the unit attaches via the standard bayonet mount.

The lighting effect produced is similar to the Mole Richardson continuous spotlight. An additional advantage of the Fresnel Spot Attachment is that it is lightweight enough to be used easily with the Compuls self-contained units.
12-3033 .... **$1050.00**

The **Hazylight** is designed to produce soft "wrap around" subject illumination over a 20 degree field. Its large 40"x40" parabolic reflector reduces light scatter and yields higher illumination and color saturation than an equally powered multi-head banklight. The Hazylight is highly recommended for advertising, fashion, and still-life photography.

The Hazylight 2 reflector requires one of several special lampbases which are designed to optimize its light distribution:

Pulso to Hazy Lampbase, for all Broncolor power packs; 1600Ws or 3200Ws heads are available. A glass counter-reflector and special glass protector must be used.

Pulso Twin Hazylight Lampbase allows two 1600Ws power packs to be used to produce 3200Ws of power, a very economical solution when high output is not a constant requirement. Additionally, the twin head allows a faster flash duration from one pack. A
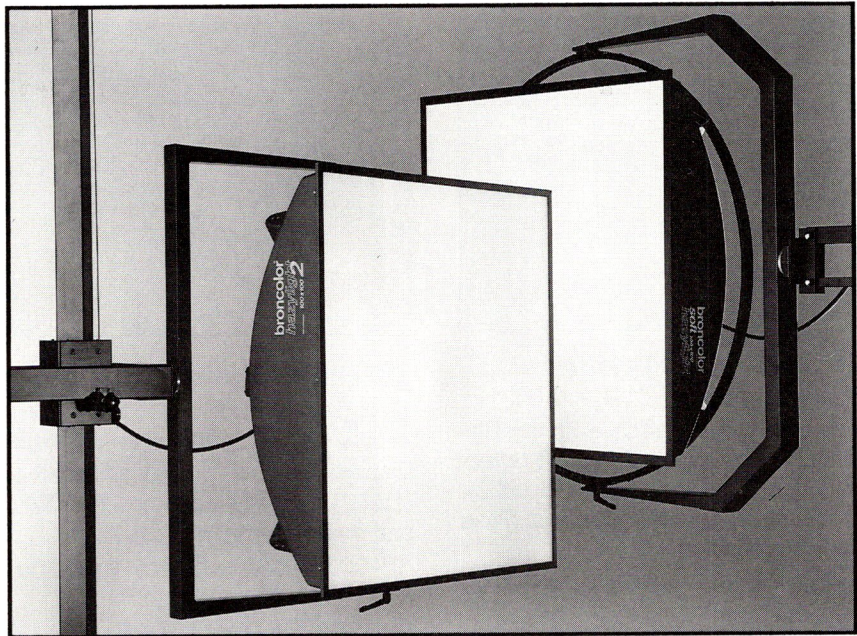
new Twin 4 version lets you combine the power of 2 3200Ws packs.

For maximum output, the **Hazylight Lampbase 6400** provides a maximum rating of 6400Ws with a Pulso 8 pack.

The Hazylight Soft does not require a special lamphead, only the addition of a glass counter reflector and a standard Pulso 2/4 lamphead. The Pulso Twin and Pulso 8 lampheads do not require a counter reflector.

Hazylight Soft
The Hazylight Soft features a new white interior, sturdy 40" x40" plexiglas diffuser and the use of a standard Pulso lamphead instead of a Hazy lampbase.
The major lighting difference is that any reflected highlights will be absolutely without variation from edge to edge. The Hazy Soft is perfect for silverware, glass, jewelry and other reflective objects.
Requires counter reflector (12-2015) and lamphead.
12-0392 .... **$2420.00**

Hazylight 2
The traditional Hazylight is improved upon with the new Hazylight 2. The use of new materials in the construction and the addition of a ring for easy rotation of the reflector greatly improve the performance.
The Hazy 2 is the best light for textured surfaces such as cloth, leather, food, etc. Requires Hazy Lampbase.
12-0390 .... **$2420.00**

Counter-Reflector
For Hazy Soft with Pulso 2/4
12-2015 .... **$140.00**

Barn Doors to Hazylight, Striplight and Cumulite
12-4016 .... **$570.00**

Honeycomb to Hazylight 2 / Hazylight Soft
12-0393 .... **$690.00**

Honeycomb to Hazylight (traditional)
12-4009 .... **$690.00**

Diffuser Foils with Tape
15-3008 .... **$130.00**

Diffuser Foil
10 meter roll for 5 replacement foils.
15-3009 .... **$489.00**

Polarizing Filter to Hazy
15-3014 .... **$2645.00**

Hazy Diffusion Foils with Frame and Tape
15-3016 .... **$275.00**

broncolor
Rigid Reflectors
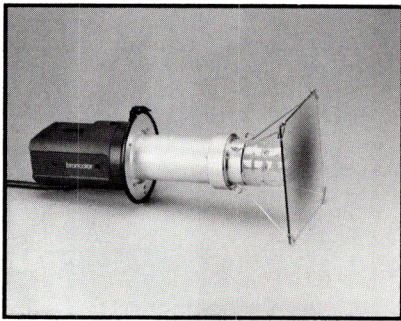
1600Ws Pulso to Hazy Lampbase 2

Fan-cooled head for use with the Traditional Hazylight and Hazy 2 reflectors. Includes flash tube (15-0002), modeling lamp (15-2001) and glass counter-reflector.

12-0021 .... $1390.00

Mat Protection Glass, non-UV

15-0928 .... $130.00

3200Ws Pulso to Hazy Lampbase 4

Fan-cooled head. for use with the Hazy or Hazy 2 and a Pulso 4 power pack. Includes flashtube (15-0004), modeling lamp (15-2001), UV protection dome (15-0028) and glass counter-reflector.

12-0027 .... $1750.00
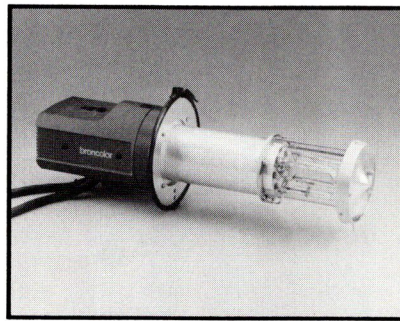
2x1600Ws Pulso Twin Hazylamp

Allows up to 3200Ws to be fired through one head. Includes flashtube (15-0011), modeling lamp (15-2001) and metal counter reflector.

12-0035 .... $1890.00

2x3200Ws Pulso Twin Hazylamp

Twin head for the Traditional Hazylight and Hazy 2, can handle two Pulso 4 power packs for a total of 6400Ws. Includes flashtube (15-0012), modeling lamp (15-2001) and metal counter-relfector.

12-0036 .... $2080.00
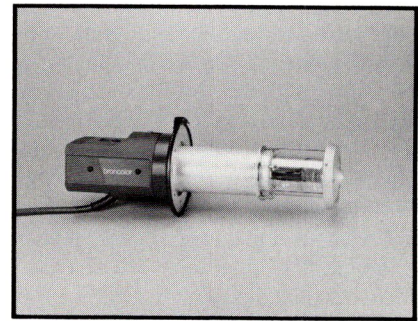
6400Ws Pulso 8 Hazy Lamp

6400Ws , 220v

For use with Pulso 8 only. Includes flashtube (15-1005), modeling lamp (15-2005) and aluminum counter reflector. Use 650W modeling lamps only.

12-0038 .... $2050.00

Ask About Our New Lighting Workshop Coming this April

Call

1-(800) 456-0203

For orders, information and technical support

In terms of operation and control, the competition just doesn't have it compared to Broncolor.

I'd say the consistency is what impresses me the most. When I change one stop on other packs, it isn't always consistent. On my Pulsos, I know I'm dealing in accurate amounts.

When I'm fine-tuning my lighting I hardly even have to think about it — +1 here, -2 there, and it's accurate. It's so easy I almost don't need an assistant.

I don't know how anyone
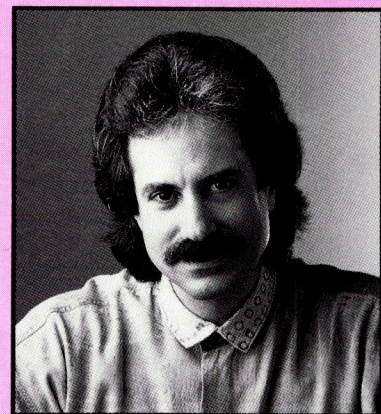
who believes in quality control can afford not to own Broncolor.

—Paul Simone Media, PA

Hazylight Stands
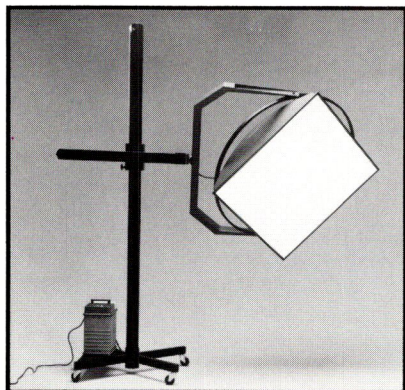
Broncolor 301 Stand
For use with the Hazylight or Mini-Cumulite reflectors, the 301 features single column construction, and can be easily moved about on its caster base. A built-in stand runner provides rapid vertical adjustments. A well designed reflector mounting system incorporating friction locks allows you to easily place the light over, under, or beside the subject. The Hazy-Stand is supplied with a mounting plate to hold a Broncolor power pack. Maximum height is 8.8 feet.
13-1005 .... $3120.00

Flamingo Stand
(needs adapter)
For Hazylight or Striplight
The Flamingo stand is designed to make the movement of large reflectors such as the Striplight and Hazylight fast and hassle-free. With the crank handle you can raise the lamp to a height of 10.7 feet. The stand will fit under a 7 foot ceiling, and the 5 foot cantilever will allow the reflector to stay at the same angle when it is raised and lowered.
Requires adapter (13-1011).
13-1010 .... **$2300.00**
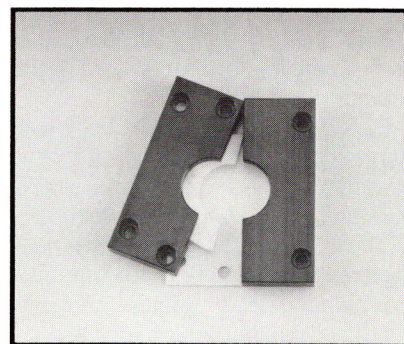
Flamingo Adapter for Hazylight Reflector
13-1011 .... **$140.00**

Counterweight for 301 Stand
13-1006 .... **$230.00**

1-(800) 456-0203
Orders and Information

broncolor
Rigid Reflectors

Recommended Hazylight Combinations

- Hazylight 2 Reflector (12-0390)
- Pulso-Hazy Lampbase
    1600, 3200, 6400, 2x1600 or 2x3200 Ws
- Mat Dome
- Stand - Flamingo (13-1010) w/ adapter (13-1011)
        or Hazy Stand 301 (13-1005)
- Power Pack
    Flashman 1 or 2, Pulso 2, 4, 8, A2, A4

- Hazylight Soft Reflector (12-0392)
- Pulso 2,4,8 or Twin Lampbase
- Counter Reflector 2/4
- Stand - Flamingo (13-1010) w/ adapter (13-1011)
        or Hazy Stand 301 (13-1005)
- Power Pack
    Flashman 1 or 2, Pulso 2,4,8, A2, A4

61
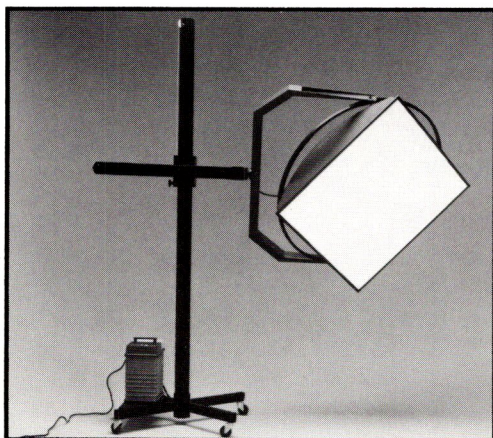
Broncolor is proud to introduce the new Cumulite 2 broad area light source.

Because the Cumulite 2 uses two standard Pulso lampbases, it's now more affordable to equip your studio with the ultimate large-area rigid box.

The Cumulite 2's glass counter-reflectors, white interior coating and plexiglass diffuser ensure perfectly even light, making it the natural choice when you're working with reflective objects. The hard plexiglass diffuser won't show surface wrinkles in reflective highlights the way fabric diffusers can.

For increased contrast and brilliant color saturation, you can add a third, central lampbase to the Cumulite 2 reflector. The third lampbase produces a hot spot in the center of the reflected illumination if desired. Use a Pulso F2 or F4 focusing lampbase if you want to control the size and relative intensity of the hot spot. A new honeycomb grid is now available to further increase contrast and saturation.

The Cumulite 2 uses the same suspension systems and stands as the original Cumulite reflector. With Pulso power packs and a motorized rail system, all pack functions and mechanical movements can be controlled with the Servor 3 infrared transmitter.
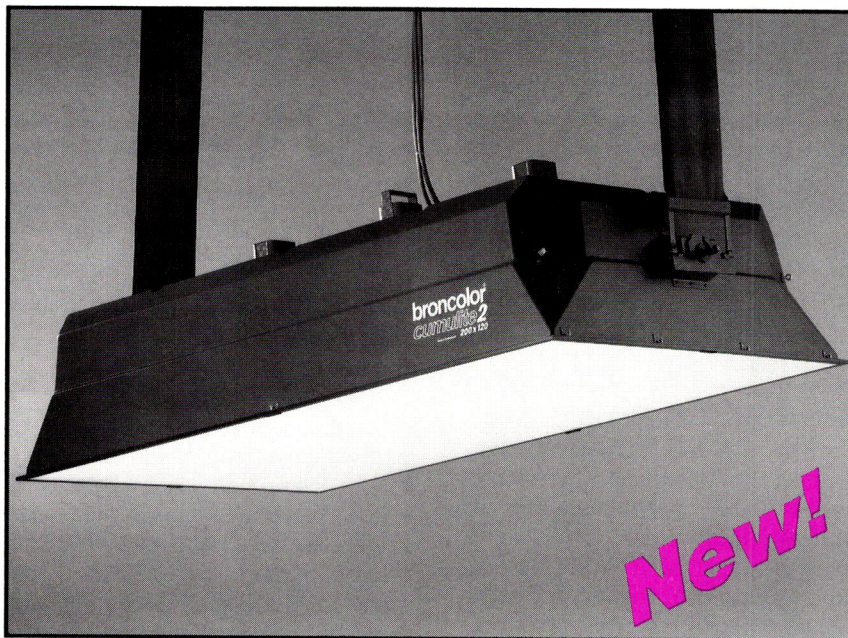
Cumulite 2 Reflector
f/32.7 @ 3200Ws (6 1/2 ft., ISO 100) 79x48" fiberglass reflector supplied with plexiglas diffuser, 2 glass counter-reflectors and cover for central opening. Weight 64 lbs.
12-2026 .... **$5320.00**

Honeycomb for Cumulite 2
Provides hard, direct light for higher contrast and color saturation.
12-3040 .... **$1650.00**

Motorized Cumi Stand
For the Single Cumulite and Cumulite 2 reflectors. Maximum height is 8.5 feet. Vertical movement of reflector is motorized. Casters and power pack platform are included.
13-4007 .... **$5575.00**

Bracket for Cumulite 2
Required for use of the Motorized Cumi Stand.
13-4009 .... **$1320.00**

I've been using Broncolor for years, and I don't see how a studio can function without it.

I like to keep an open mind towards other lighting manufacturers, but we always come back to Broncolor. Any photographer who doesn't look at an investment in the long term is in the wrong business. My philosophy is that you have to buy the best, and I think Broncolor is worth every penny.

— *Linda Bohm*
Montclair, New Jersey
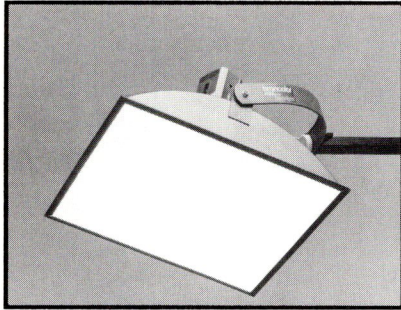
Mini-Hazylight

f 45 at 6-1/2 ft. (3200Ws, 100 ISO)
The Mini-Hazylight gives a lighting effect similar to the 40" Hazylight. However, the Mini-Hazy has a white interior for lower contrast, and it uses standard lampbases without counter-reflectors. The 25" square size makes this unit more portable than the larger Hazy.

Mini-Hazylight 65x65 cm

(25"x25") Includes holder for connection to 301, or Hazy/Flamingo Stand.
12-0465 .... **$1150.00**

Mini-Hazylight 65x65 cm

Mini-Hazy without bracket, for connection to Compuls. (cannot be used with Pulso Lampheads)
12-0464 .... **$1190.00**

Mini-Hazylight 65x65 cm

Mini-Hazy with holder for connection to Mini-Hazylight stand (or 3/8" threaded bolt).
12-0460 .... **$1130.00**
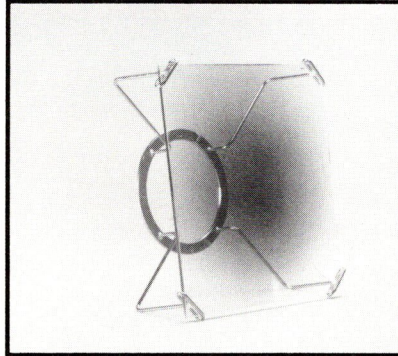
Counter-Reflector for Pulso 2 / 4

12-2015 .... **$140.00**

Counter-Reflector for Pulso 8 / Twin

12-2016 .... **$100.00**
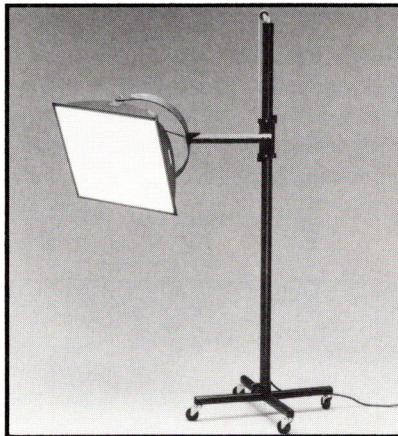
Mini-Hazylight Stand
Maximum height 7.4 ft.
13-0460 .... **$1149.00**
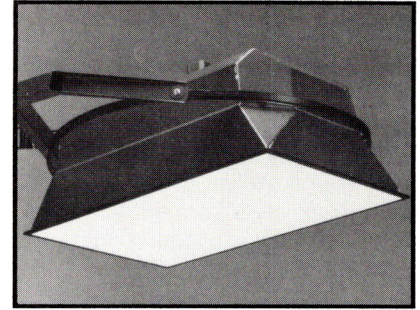
Mini-Cumulite

The Mini-Cumulite has a lighting area of 31"x47", similar to the Cumulite with a white interior coating and rigid plexiglas diffuser. The Mini-Cumulite accomodates a single sttandard Pulso 2/4 lampbase. Even lighting is guaranteed by a glass counter reflector in front of the flashtube.

In addition, reflector features a rotating ring which gives it a full range of self-arresting movements.

Mini-Cumulite for 301

Requires counter-reflector.
12-2014 .... **$2990.00**

Mini -Cumulite for Rail System

For connection to overhead rail support (see Suspension kits - pg. 92)
12-2018 .... **$2530.00**

Broncolor 301 Stand

For use with Mini-Cumulite or Hazylight reflectors. See pg. 61.
13-1005 .... **$3120.00**

broncolor
Rigid Reflectors

Giant Light Bank

The Giant Light Bank is the ideal solution for many situations requiring large light sources. This continuous, **seamless** diffusion screen and support framework measures 100x300 inches, yet its light output is even to within 1/3 stop from edge to edge. The GLB is built upon 1 inch square tubing and weighs about 180 pounds. It can be disassembled for storage or location shooting. The reflector is the exclusive Broncolor silver/black bonded fabric.

Its size can be customized for your needs, and the suspension system can be designed around your requirements.
Movements can be controlled with ropes or automated by Servor infrared control on a rail system.

Giant Light Bank (without heads)
12-2050 .... **$12830.00**

Complete details and quotations which include supervision of installation are available upon request.
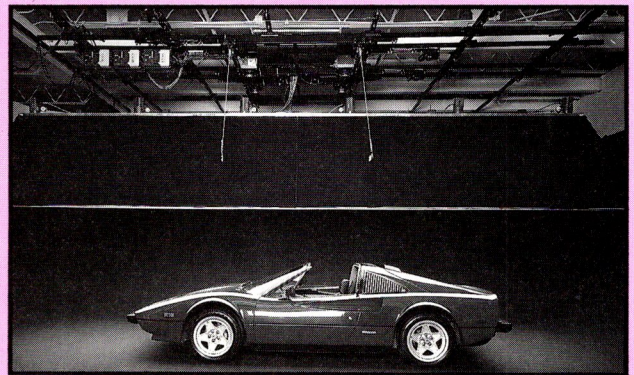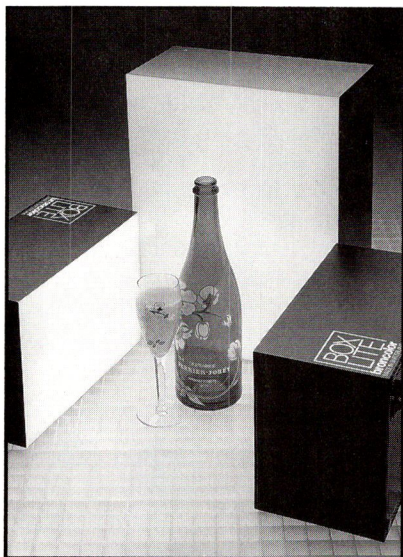
Specialized Lighting Units

Boxlite 30 and 40

The Boxlite offers decisive advantages, particularly for assignments involving subjects with shiny surfaces.

The Boxlite provides uniform lighting; its innovative design provides even illumination from edge to edge. Its sealed front is spillproof, making it ideal for food photography.
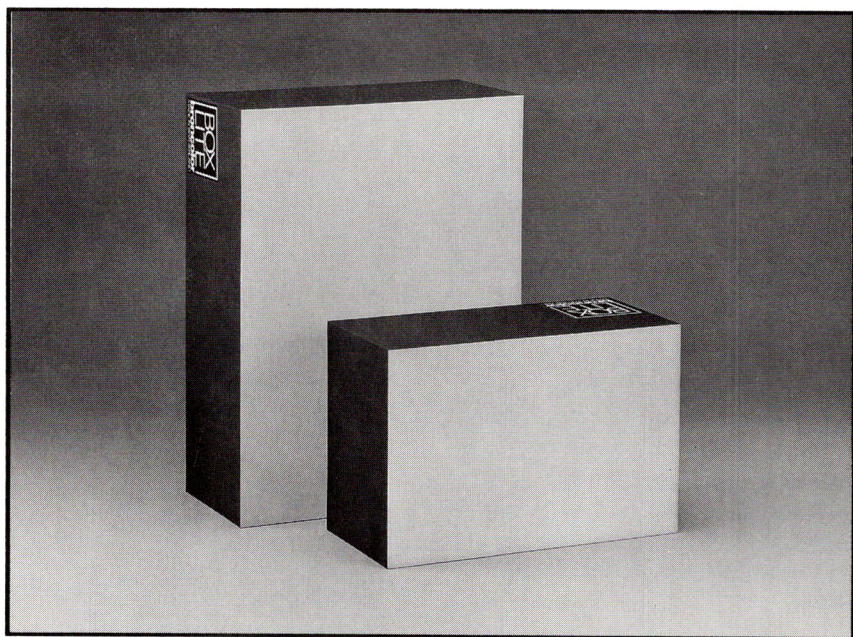
Boxlite 30 (8" x 12")
f/ 22 at 6-1/2 ft., 1600ws, 100 ISO
f /45 1/2 at 2 ft., 1600ws 100 ISO
With 1 flash tube, 2 modeling lights, quick change head.
12-2020 .... **$1030.00**

Boxlite 40 (12" x 16")
f/ 22 at 6-1/2 ft., 1600ws, 100 ISO
f /45 1/2 at 2 ft., 1600ws, 100 ISO
With 2 flash tubes, 4 modeling lights quick change head.
12-2025 .... **$1380.00**

*S*inar Bron was always my first choice! The fine quality of the Sinar cameras and Broncolor lighting equipment has helped me produce consistently high quality images for years. The equipment makes my job a lot easier.

—William Wagner
Our Studio
Cranford, NJ

Effect Light

The Effect Light is a small 950Ws bare tube clamp-on light unit without a modeling lamp. It is used as a backlight in portraiture or to produce effects requiring hidden sources of illumination. Reflector is included.
12-3001 .... **$680.00**

950Ws Flashtube to Effect Light
15-1006 .... **$190.00**

The specialized lighting units on these pages are designed to be used in conjunction with most Broncolor power packs. Each of these units contains its own flashtube assembly and therefore does not require a separate lamphead.

Striplight

The Broncolor Striplight's 62" x 8" lighting surface makes it an ideal main or accent light as well as a multi-purpose background light.

The Broncolor Striplights provide long, uniform reflections on shiny surfaces for still life assignments.

When used as a sidelight, the Striplite brings out texture and detail in fabrics and other materials , and provides dramatic modeling on coutoured surfaces.
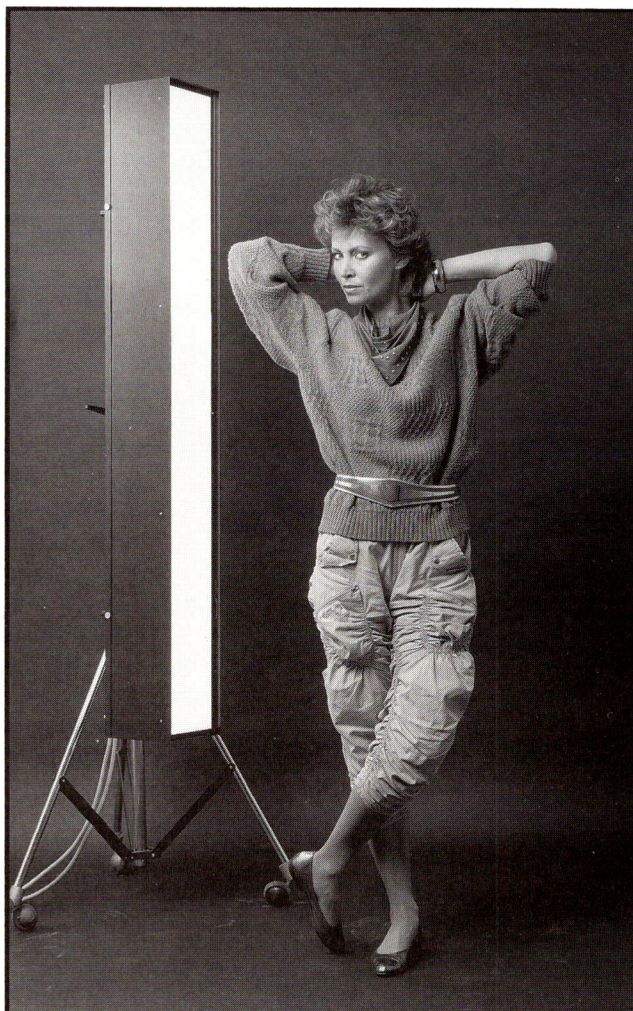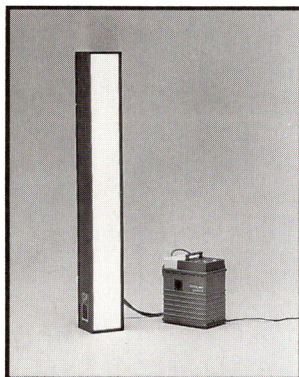
Striplight 2x3200Ws, 120V

f /32-2/3 at 6-1/2 ft., 2x3200Ws, 100 ISO

Includes 4 flash tubes (15-1017) and 8 x 40W modeling lamps. Two connection cables allow operation by one or two power packs for 1600 to 6400Ws. The 2x3200Ws model is compatible with the Pulso 2/4, A2/A4 and the Opus 2/4 and A2/A4.

12-6001 .... **$3090.00**

Striplight 6400Ws Pulso 8 240V.

f /32-2/3 at 6-1/2 ft., 6400Ws, 100 ISO

Includes 4 flashtubes (15-1017) and 8 x 60W modeling lamps. One connection cable may be used with one power pack only for up to 6400Ws.

12-6010 .... **$2830.00**
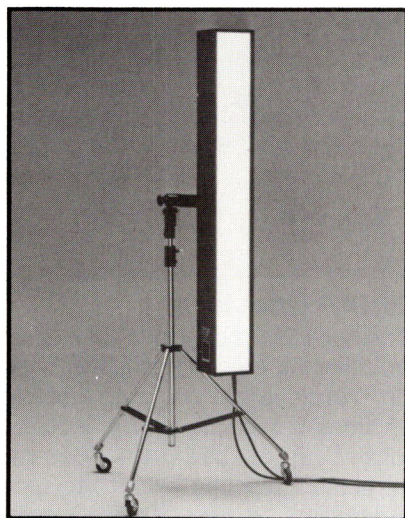
Stand for Striplight
13-3003 .... **$299.00**
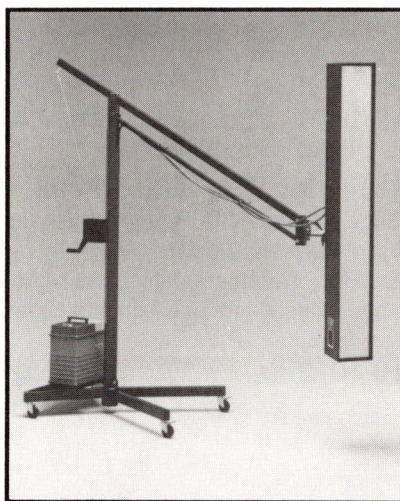
Flamingo Stand
Requires adapter (13-1012)
13-1010 .... **$2300.00**

Adapter Striplight / Flamingo
13-1012 .... **$225.00**

Call

1-(800) 456-0203

For orders, information and technical support

FM Flashmeter

The Broncolor FM is an accurate, easy to use incident flashmeter. F-stop readings are displayed on a large, easy-to-read LCD. The FM can trigger Broncolor power packs by sync cable or infrared, and can also take readings from packs triggered manually.

With the FM you can read single flashes or accumulate multiple strobe pops.

> Range: f/1.0 - f/90 2/3
> Increments: 1/3 stop
> ISO Range: 25 - 800
> Display: LCD
> Infrared : Triggering of Broncolor packs

17-2205 .... **$459.00**

Case for FM / FCM Meters

Nylon case for FM and FCM meters (included with FCC.)
16-1009 .... **$12.00**
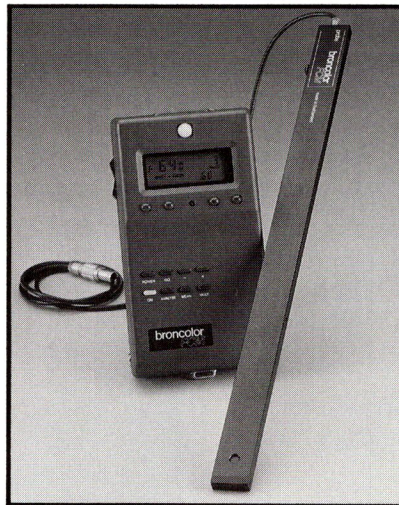
FCM Flashmeter

The Broncolor FCM measures both flash and continuous light, and can function as an incident meter or as a film plane meter with the addition of the FCM Probe.

Features include infrared triggering of Broncolor packs on two channels, multiple flash measurement, mean and contrast readings and infrared power level control of Pulso packs.

The FCM also allows you to take simultaneous flash and continuous light and analyze both readings separately. Requires one 9-v battery.

> Range: f/1.0 - f/180.9
> Increments: 1/10 stop
> ISO Range: 3 - 4000
> Display: LCD
> Infrared : Triggering and power control of Broncolor packs

16-1010 .... **$799.00**

Probe for FCM Flashmeter

Plugs into the FCM meter to give you film plane metering capability with any large format camera. (Requires Light-meter Cassette for use with non-Sinar cameras.)
16-1012 .... **.$340.00**

FCC Color/Flash Duration Meter

Broncolor's newest meter measures color temperature and is also the first hand-held flash duration meter. The FCC displays the color temperature of flash or continuous sources and calculates the proper filtration for any type of film.

Other features include infrared triggering and color temperature control of Broncolor power packs and Lux readings of ambient light levels.

Includes case. Requires one 9-volt battery (not included.)
16-1020 .... **$1149.00**
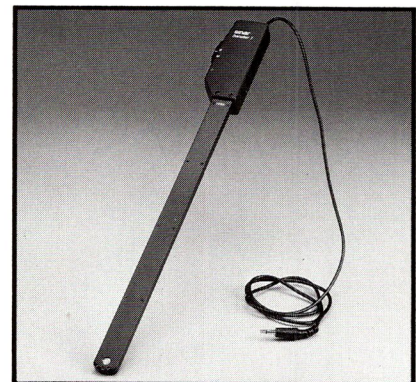
SINAR Booster 1

The Booster 1 is designed to be used on either the Minolta Flashmeter IV or III. This probe is long enough to reach all areas of a 4x5, 5x7 or 8x10 metering back. It has a built in window on the tip of the meter to allow precise spot positioning. It also has two plastic bumpers so it will not damage the ground glass of your camera. The probe can measure both continuous and strobe light.
22-1025 .... **$966.00**
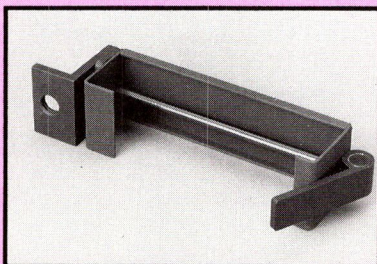
FCM Holder

Keep your FCM conveniently attached to the side of your SINAR camera while using the FCM Probe.
16-1013 .... **$65.00**

IRI Infrared Transmitter
Effective range 40 feet.
17-2105 .... **$219.00**

IRI / IRS Camera Sync
Replacement camera/transmitter
sync cord.
17-2106 .... **$19.00**
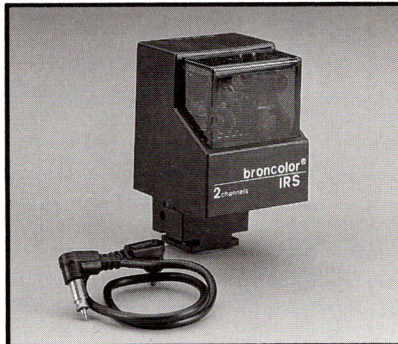
**IRS Two Channel
Infrared Transmitter**
Allows infrared triggering of Broncolor
packs from up to 60 feet away. Can
be used from hot shoe or with sync
cord. Includes sync and battery.
16-2002 .... **$375.00**

Broncolor IRS-E
This new long range two channel
transmitter is compatible with all cur-
rent Broncolor power packs. The
range outdoors in bright sunlight is 350
feet! Two AA batteries operate the unit
and deliver up to 3000 firings.
16-2008 .... **$345.00**

broncolor
Additional Accessories

Miscellaneous Accessories

Case for Pulso 2 or lamps
10-1110 .... **$299.00**

**Case for Power Pack with
casters**
Fits Pulso 2 or 304/404.
11-3010 .... **$365.00**

Case without casters
Fits Pulso 2 or 304/404.
11-3020 .... **$300.00**

Pulso Wall Adapter, Bayonet
12-0910 .... **$85.00**

**Pulso Wall Adapter,
Gudgeon**
12-0912 .... **$30.00**

Pulso Adapter
For universal accessories.
12-0999 .... **$85.00**

Protection Cap
Replacement cap for Flashman,
Pulso lampheads.
12-9111 .... **$15.00**

**Adapter for 12-1012 to
Broncolor Post**
13-4005 .... **$15.00**

**Adapter for 12-1012 to Foba
Pantograph**
13-4006 .... **$25.00**

Cables

Type	Length	Product #	Price
Lamp Extension*	16 ft	15-4007	$265.00
Lamp Extension*	32 ft	15-4008	$226.00
Power , Pulso/Flashman	10 ft	15-4010	$ 22.00
Sync Pulso/Flashman **	16 ft	15-0050	$ 70.00
Sync Pulso/Flashman **	32 ft	15-0055	$ 90.00
Sync Extension Pulso/Flashman**	32 ft	15-0060	$ 90.00
Sync, Flashman***	13 ft	17-2080	$ 19.00
Sync, Universal	16 ft.	15-4001	$ 87.00
Sync, Universal	32 ft	15-4002	$120.00
Sync Extension, Universal	32 ft	15-4004	$120.00
Sync Extension, Universal	16 ft	15-4005	$110.00
Sync Extension, Universal	32 ft	15-4006	$130.00

*　 For Flashman, Pulso 2 and 4. May be used with universal series packs also.
**　 For Flashman, Pulso 2, 4, 8 and Impact.
***　 For Flashman, Impact only

Stands

Stand	Height	Features	Catalog #	Price
Foba Staro Stand	6.5'	Requires (31-0902) and (13-3024) for use with Pulsospot 4.	31-0906	$360.00
Junior Stand	8.2'	4 extensions. Ideal studio light stand	13-1002	$200.00
Senior Stand	9.2'	4 extensions. Heavy-duty light stand	13-1003	$250.00
Super Boom with Stand and Arm	8.2'	Stand and boom arm with adapter to Pulso head, with 2 hand cranks, stand attachment device, counter balance and casters.	13-3002	$840.00
Mini-Hazylight Stand	7.4'	Adjustable height arm	13-0460	$1149.00
Hazy Stand 301	8.8'	Easy vertical/horizontal positioning of Hazylight or Mini-Cumulite reflectors. See pg. 61	13-1005	$3120.00
Flamingo Stand	10.7'	Special cantilevered design for Striplite, Hazylight reflectors. See pg. 61	13-1010	$2300.00
Cuml Stand Motorized	8.5'	Motorized vertical movement for single Cumulite 2. Features extension arm, casters, platform for power pack. Includes bracket (13-4009).	13-4007	$5575.00

Foba Clampholder, for Staro Stand
31-0902 .... $148.00

Threaded Bolt to Clamping Holder
13-3024 .... $55.00

Bolt, Broncolor to 3/8" Thread
13-4005 .... $15.00

Bolt, Broncolor to 3/8" Thread & Foba Seat
13-4006 .... $25.00

Stand Holder for Pulso to Junior Column
Attach power pack to stand
13-0025 .... $70.00

Casters for Senior
(set of 3)
13-4001 .... $70.00

Adapter Pulso to Superboom
13-3004 .... $59.00

Adapter Universal Series to Superboom
13-3005 .... $59.00

Three-Legged Base
With Pulso bolt and 3/8" thread.
13-4002 .... $110.00

Bracket to Cumulite
Required for use of stands.
13-4009 .... $1320.00

	Fuses Sold in Sets of 10		
3.15 AF	Pulso Lampbase	15-5011	$39.00
6.3 AFF	C70 / C171 / Unvl Lampbases	15-5007	$29.00
8 AT	750 RT Power Pack	15-5001	$27.00
10 AFF	606 Lampbases	15-5005	$29.00
10 AT	750 RT / 1500 RT Power Pack	15-5010	$29.00
12.5 AT	1500 RT Power Pack	15-5009	$29.00
16 AF	200 / 260 / 606 Power Pack	15-5006	$35.00
16 AT	Flashman, Pulso 220V, 304/404 Power Pack	15-5003	$35.00
20 AT	Pulso 120V Power Pack	15-5012	$29.00
250 Mat	200/260 Power Pack	15-5008	$12.00
500 Mat	Spot Projector - Lampbase	15-5004	$25.00

Note:
To prevent possible damage to modeling bulb and flashtube, use only the recommended super fast-blow fuse.

Flashtubes

Most Broncolor flashtubes are supplied with a UV light absorbent coating. Normal coating is 5300°K (±150°)

Capacity	Used in following systems	Cat #	Price
150Ws	Impact 21	17-2012	$100.00
300Ws	Impact 41, Impact 21	17-2014	$145.00
170 Ws	C-70 compact units	15-1001	$215.00
375Ws	C-171 compact units	15-1002	$225.00
800Ws	Boxlite-Large (2x)	15-1015	$185.00
800Ws*	Boxlite-Large (2x)	15-1020	$175.00
950Ws	Universal/Flashman	15-1010	$250.00
950Ws	Effect light	15-1006	$190.00
1600Ws	Flashman, Pulso2, Pulso2-Hazy, Compuls	15-0002	$340.00
1600Ws	UV-s coating for above units	15-0102	$391.00
1600Ws	Universal, Universal Hazy	15-1004	$370.00
1600Ws	UV-s coating for Universal	15-1104	$370.00
1600Ws	Spotlight (old style)	15-1007	$380.00
1600Ws	Spot Projector (old style)	15-1008	$375.00
1600Ws	Combiflex	15-1009	$725.00
1600Ws	Cumulite lighting elements	15-0013	$189.00
1600Ws	Boxlite-Small	15-1014	$260.00
1600Ws*	Boxlite-Small	15-1019	$250.00
1600Ws	Striplight	15-1017	$375.00
2x1600Ws	Pulso Twin, Twin Universal, Twin Hazy	15-0011	$630.00
2x1600Ws	UV-s coating for Pulso Twin	15-0111	$675.00
3200Ws*	Pulso 4, Pulso Hazy	15-0004	$570.00
3200Ws*	Pulsospot 4	15-1022	$650.00
2x3200Ws	Pulso Twin 4	15-0012	$780.00
2x3200Ws	UV-s coating - Pulso Twin 4	15-0016	$780.00
2x3200Ws*	Pulso Twin 4	15-0017	$760.00
6400Ws	Pulso 8, 606 Universal, Pulso 8-Hazy	15-1005	$920.00
6400Ws	UV-s coating for above units	15-1105	$960.00

Special UV coating (UV-s) 5000°K (±150°): Special order, 4 week delivery.
*Uncoated (clear) 5900°K (±150°)

Protection Glass
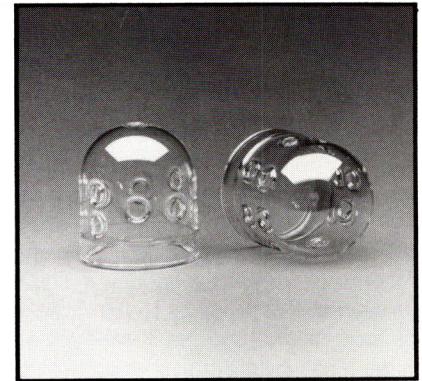
Protection Glass for Pulso 2
15-0022 .... $95.00

UV Protection Glass for Pulso 4
15-0026 .... $130.00

UV-S Protection Glass for Pulso 4
15-0126 .... $130.00

UV Mat Protection Glass for Pulso to Hazy
15-0028 .... $130.00

UV-S Mat Protection Glass for Pulso to Hazy
15-0128 .... $130.00

Non-UV Mat Protection Glass for Pulso to Hazy
15-0928 .... $130.00

Modeling Lamps

40W Modeling Lamp for Boxlight
15-2007 .... $11.00

50W Modeling Lamp for Impact
17-2010 .... $16.00

60W Modeling Lamp for Striplight
15-2008 .... $12.00

150W Modeling Lamp for Combiflex
15-2002 .... $20.00

250W Modeling Light EHT
For use with all 110v lampheads except as listed.
15-2001 .... $28.00

250W Modeling Lamp 225V Cumulite
15-2006 .... $86.00

650W Modeling Lamp 240V Pulso 8, 606
15-2005 .... $40.00

The Impact line features two compact flash units rated at 150 and 300Ws respectively. With its full range of accessories, this Broncolor line represents an ingenious lighting system tailored to the practical requirements of today's photographer. Many features like infrared triggering, multi voltage, built in slave, and proportional modeling lamps are incorporated into each unit.

Impact 41

f32 at 6 1/2 ft (ISO 100, standard silver reflector)
Includes bracket, protection cap, power cable, flashtube, modeling lamp 50W. Without reflector, sync cable, and protection glass.
17-1041 .... **$880.00**

Quartz Flashtube to Impact 41
17-2014 .... **$145.00**

Impact 21

f22 at 6 1/2 feet (ISO 100, standard silver reflector.)
Includes bracket, protection cap, power cable, flashtube, modeling lamp 50W. Without reflector, sync cable, and protection glass.
17-1021 .... **$520.00**

Pyrex Flashtube to Impact 21
17-2012 .... **$100.00**

50W Modeling Lamp
For Impact 21/41.
17-2010 .... **$16.00**

6.3 AF Fuse for Impact
Package of 10.
17-2005 .... **$28.00**

New!
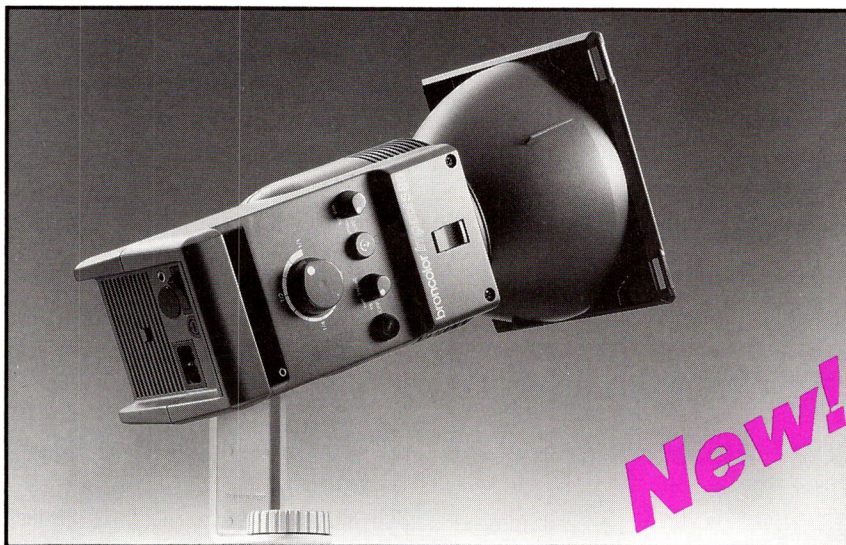
Impact S40

f/32 at 6 1/2 ft. (ISO 100, standard silver reflector)
Includes flashtube, 150W modeling lamp, power cable, protection cap.
17-1040 .... **$980.00**

Impact S80

f/45 at 6 1/2 ft. (ISO 100, standard silver reflector)
Includes flashtube, 150W modeling lamp, power cable, protection cap.
17-1080 .... **$1290.00**

Impact S

Broncolor has added two powerful new members to the Impact family with the S40 and S80 self-contained units. The new Impacts weigh in at 300 and 600Ws respectively, providing output as high as f/45 (ISO 100, 6 1/2 ft.)

Impact S units are adjustable in precise 1/3 stop increments over a 3 stop range. A new, more powerful modeling lamp makes them even easier to use. They feature auto-voltage adjustment so they can function anywhere in the world without a second thought.

Like the 21 and 41, the Impact S units can be triggered by infrared, white light slave or sync cord. In addition, the infrared and white light sensors can be switched on and off independently. The modeling lamp can be set to full proportional, or proportional with dim recycle.

Available Summer 1991

Impact kits offer the ideal package for the location photographer. Sinar Bron offers a selection of kits ranging from the Executive Kit, which comes in a soft case with two heads, to the Super Expert Kit made up of four heads in an ATA-approved hard case.

The kits offer a wide range of accessories from umbrellas and soft boxes to honeycombs and infrared transmitters.

In addition, a kit purchase can represent a substantial savings over buying the components separately.

The Impact self-contained units are multi voltage and can function anywhere in the world. This gives the photographer not only the security of knowing that each head is its own power supply, but the flexibility to travel anywhere on a moment's notice.

Impact Executive Kit

1	17-1041	Impact 41
1	17-1021	Impact 21
2	17-2061	Umbrella reflectors
2	17-2062	White Umbrellas
2	17-2024	Stands
1	17-2018	Two Head Soft Case
1	17-2080	Sync cable

17-1110 .... **$1690.00**

Impact Super Executive Kit

2	17-1041	Impact 41
2	17-2030	Standard Silver Reflector
2	17-2024	Stands
1	17-2080	Sync Cable
2	17-2016	Protective Glass Dome
1	17-2018	Two Head Soft Case

17-1112 .... **$1990.00**

Classic Kit

With heavy duty case.
Includes:

1	17-1041	Impact 41
2	17-1021	Impact 21
2	17-2030	Silver reflector
1	17-2042	Barn doors
1	17-2044	Impaflex 60
1	17-2080	Sync cable
3	17-2024	Stands
1	17-2105	IRI Transmitter

17-1061 .... **$3335.00**
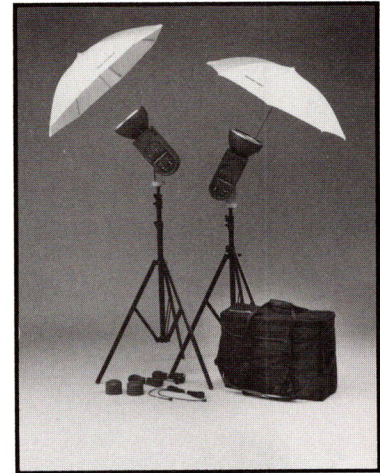
Expert Kit

With heavy duty case.
Includes:

3	17-1041	Impact 41
2	17-2030	Silver reflector
1	17-2042	Barn doors
1	17-2036	Honeycomb
1	17-2044	Impaflex 60
1	17-2061	Umbrella reflector
1	17-2066	Silver Umbrella
3	17-2024	Stands
1	17-2080	Sync cable
1	17-2105	IRI Transmitter
1	17-2072	Color filters

17-1071 .... **$4485.00**

Super Expert Kit

With heavy duty case.
Includes:

4	17-1041	Impact 41
1	17-2030	Silver reflector
1	17-2032	White reflector
1	17-2042	Barn doors
1	17-2036	Honeycombs
1	17-2044	Impaflex 60
1	17-2061	Umbrella reflector
1	17-2066	Silver Umbrella
1	17-2080	Sync cable
4	17-2024	Stands
1	17-2105	IRI Transmitter
1	17-2072	Color filters
1	17-2070	Diffusion filters

17-1081 .... **$5835.00**

broncolor
Impact

Cables

Sync Cable 16 feet
15-0050 .... $70.00

Power Cable, 10' (repl.)
17-2084 .... $16.00

Sync Cable 13 feet
17-2080 .... $19.00

Call

1-(800) 456-0203

For Orders

1-(800) 456-0203

For Information

1-(800) 456-0203

For Tech Support

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For Service

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For Workshops

1-(800) 456-0203

For Dealers

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For Financing

Meters and Transmitters
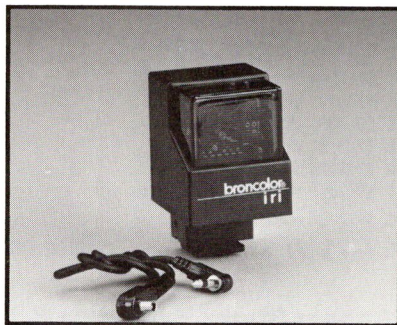
IRI Infrared Transmitter
With camera sync lead and battery. Can be used from hot shoe. Range, 30 feet (for longer distance, use IRS unit). Uses Everady 504, NEDA 220 battery.
17-2105 .... $219.00

IRI /IRS Camera Sync
Replacement camera sync for IRI and IRS transmitters.
17-2106 .... $19.00
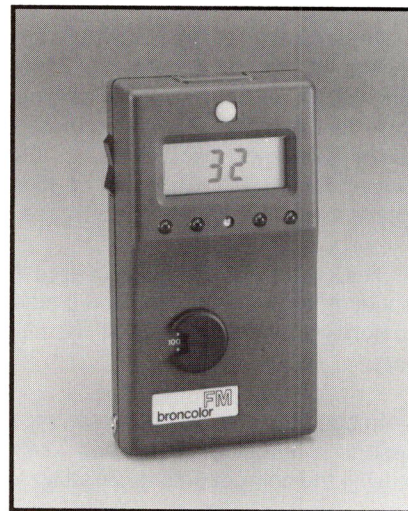
FM Flashmeter
Flash metering, in 1/3 F-stops. Single and multi flash modes as well as built in infrared triggering.
Requires 1 9V battery.
17-2205 .... $459.00

Impaflex
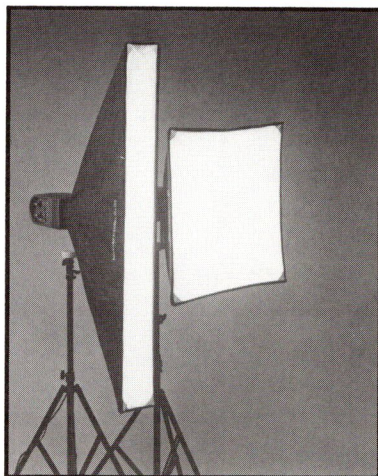
The Impaflex is a soft fabric reflector providing uniformly diffused light due to reduction of stray light and its brilliant silver reflector finish inside.

Impaflex 60 (23 1/2 "x 23 1/2")
17-2044 .... $345.00
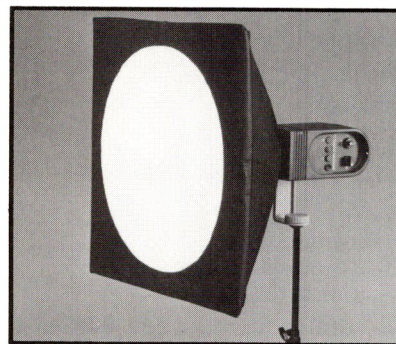
Mask with Round Cut Out
For Impaflex 60.
17-2046 .... $69.00

Impaflex 80 (31 1/2 "x 31 1/2")
17-2045 .... $399.00

Impastrip 15 x 125cm (6" x 50")
17-2050 .... $335.00

Impaflex Mounting Ring
Ring only: Must be used for bare bulb use of Impacts.
17-9100 .... $35.00

Glass Dome to Impact 21,41
For protection of flashtube and modeling lamp.
17-2016 .... **$39.00**

Glass Dome Diffused Spot
Mat top: necessary for spot attachment. Useful for diffusion.
17-2017 .... **$45.00**
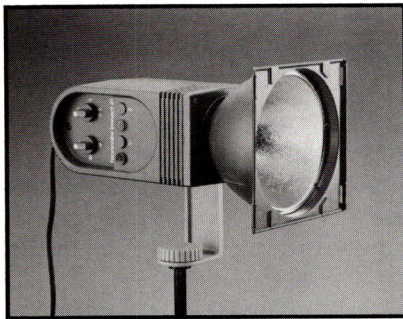
Reflector Standard Silver
17-2030 .... **$77.00**

Reflector Standard White
17-2032 .... **$77.00**
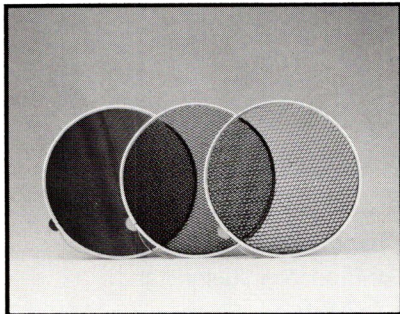
Honeycomb Grid Set
For standard reflectors, set of 3 (fine, medium, coarse).
17-2036 .... **$196.00**
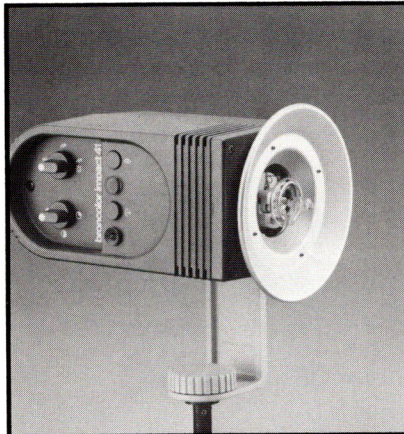
Wide Angle Reflector
17-2033 .... **$67.00**
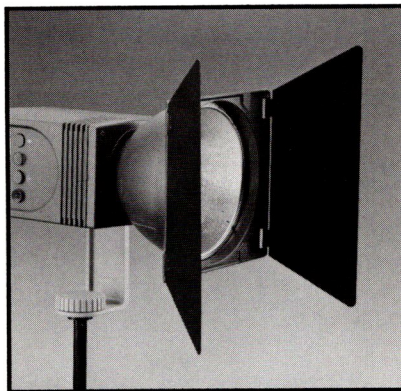
Barn Doors
For standard reflector, set of 2 pieces.
17-2042 .... **$59.00**

Diffusor Filters
For standard reflector, set of 12.
17-2070 .... **$30.00**

Color Filters
For standard reflector, set of 12.
17-2072 .... **$59.00**
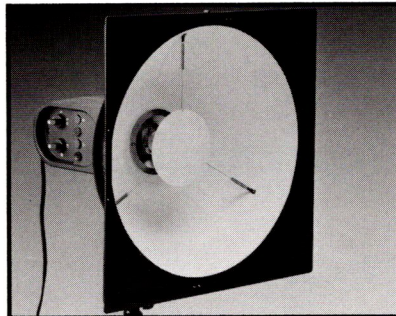
Soft Light Reflector
Complete with counter-reflector.
17-2034 .... **$265.00**

Honeycomb to Soft Light
17-2035 .... **$160.00**
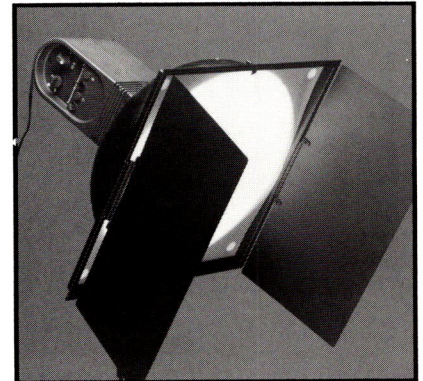
Barn Doors for Soft Light
Set of 2 pieces.
17-2043 .... **$145.00**

Conic Snoot
17-2038 .... **$115.00**

Spot Attachment
A focusing spot with built in condenser. Diffused spot and circular masks allow the photographer crisp and clean circular highlights. Equivalent to the baby spots in tungsten light studios. Includes 3 aperture masks (17-2040) and protecting glass (mat) (17-2017).
17-2039 .... **$565.00**

Aperture Masks
For spot attachment, set of 3 different openings.
17-2040 .... **$31.00**

Grill Masks
For spot attachment, set of 12 pieces.
17-2041 .... **$85.00**

broncolor
Impact

73
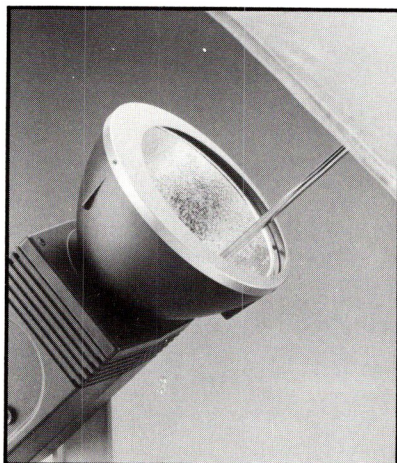
Umbrellas

Umbrella Reflector Super
Special reflector to allow mounting of umbrella. Silver finish.
17-2061 .... **$90.00**

White 35" Umbrella
17-2062 .... **$107.00**

Transparent 35" Umbrella
17-2064 .... **$107.00**

Silver 35" Umbrella
17-2066 .... **$125.00**

Stands and Adapters

Impact Stand
8 foot
17-2024 .... **$139.00**

Impact Mini Stand
With column and bolt.   Minimum height 5 inches, maximum 33 inches.
17-2025 .... **$65.00**
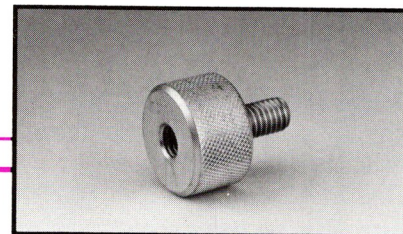
Threaded Nipple 3/8"
For using other stands.
17-2026 .... **$11.00**
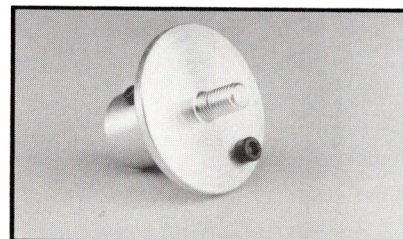
Impact Adapter to Super Boom
17-2027 .... **$46.00**
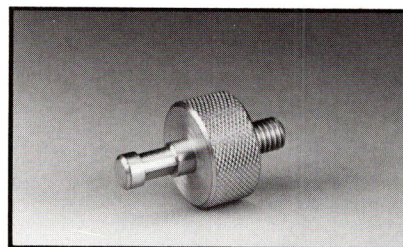
Threaded Bolt 3/8"
For Broncolor Junior stand.
17-2028 .... **$15.00**

3/8" Thread Adapter
For 3/8" rod.
17-2029 .... **$18.00**

DC Converter
Converts 12 volt auto battery for use with Impact 41 or 21. (110v)
17-2086 .... **$1138.00**

Impact Cases

Carrying Case, Heavy Duty
Holds four heads, stands, reflectors, Impaflex, color filters and more. Center columns on the stands may have to be reversed to fit.
   Dimensions 34"l x 24"w x 11"h. Weight 25 lbs.
17-2020 .... **$499.00**

Bag for Three Stands
17-2022 .... **$40.00**

Executive Kit Case
Holds two heads, plus accessories. Measures 20"l x 7"w x 14" h. Weight 4 lbs.
17-2018 .... **$160.00**

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For expert answers to all of your technical questions

Broncolor's Fiber Optic System For Impact

The Impact Fibro fiber optic system is most useful for close-up shots of small subjects. The flexible tubes enable precise light placement close to the subject. With an Impact 41 at 10 cm, ISO 100 you get f64 with the focusing lens, f32 1/3 without. Impact Fibro is used alone or in combination with other light sources, to intensify or enhance single objects. Impact Fibro will also increase the brilliance of transparent objects such as jewelry or glass. Many other uses apply in small object photography.

Impact Fibro Kit
Includes:
1 Fiber Optic Front 17-3010
2 Optic Fibers 17-3005
2 Focusing lenses 17-3015
2 Arms 17-3030
2 Clamps 17-3035
1 Case 17-3045
17-3001 .... **$2499.00**

Fiber Optic Fiber 40 Inch
Made from glass fiber, with black flexible casing, active diameter 10mm, length 102cm.
17-3005 .... **$749.00**
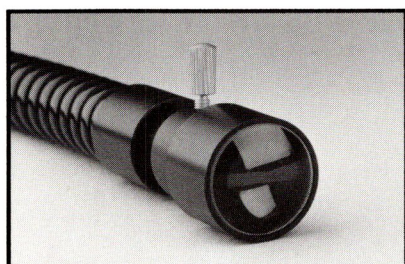
Focusing Lens
With tube, insertable and adjustable on optical fiber, with locking screw.
17-3015 .... **$177.00**

Fiber Optic Front for Three Fibers
For Impact units, contains three sockets and one termination plug.
17-3010 .... **$850.00**

Front Termination Plug
17-3011 .... **$36.00**
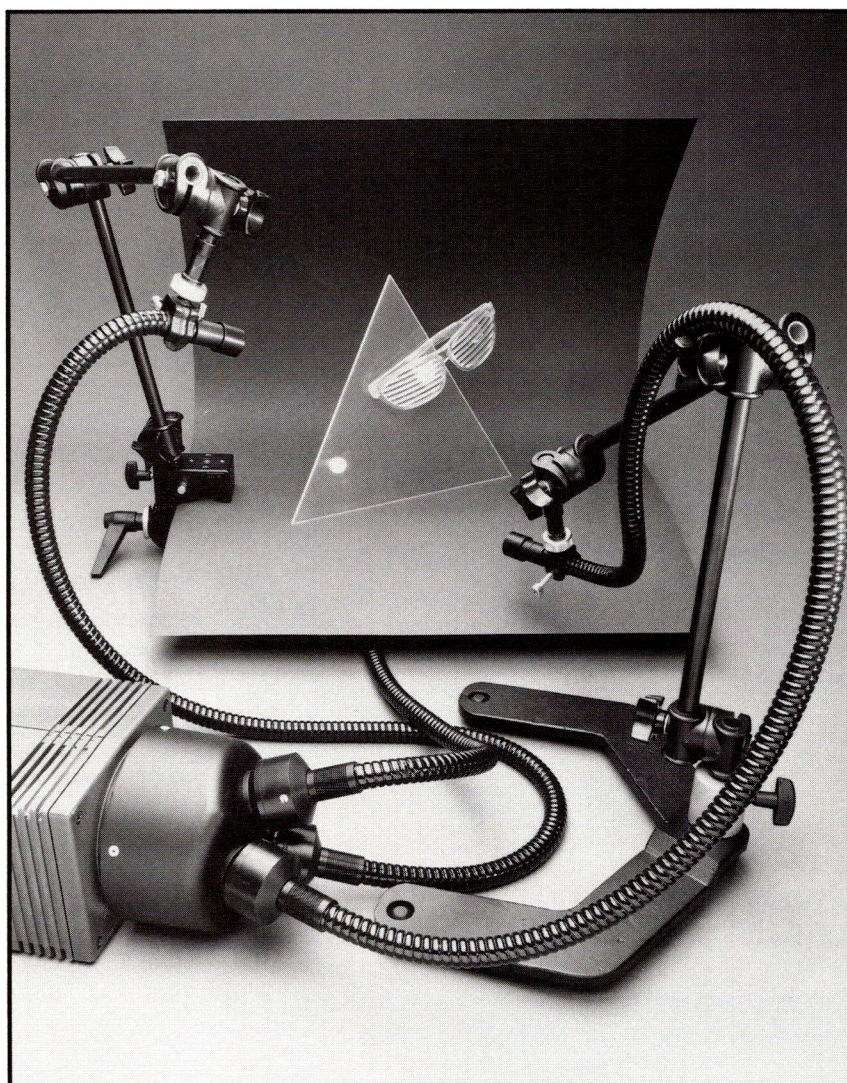
Color Filter Attachment
To plug-in on fiber optical front, with filter slit to insert filter foil with hole mask.
17-3018 .... **$320.00**

Color Filter Set
Set of 12 foils of various colors 45mm x 45mm with one mask hole for correct leading.
17-3020 .... **$36.00**

Grey Filter Set
Set of 12 foils, 4 each of (1,2, and 3 f-stop light reduction) with one mask.
17-3025 .... **$34.00**

Articulated Arm
17-3030 .... **$115.00**

Clamp to Attach Arm to Table
17-3035 .... **$49.00**

Iron Base for Arm
17-3040 .... **$85.00**

Case without Contents
17-3045 .... **$229.00**

Optical Fiber with Two Strands
Half flexible plastic tube with active diameter of 2 mm. Length 750mm.
17-3055 .... **$649.00**

ASTIO Camera Stands
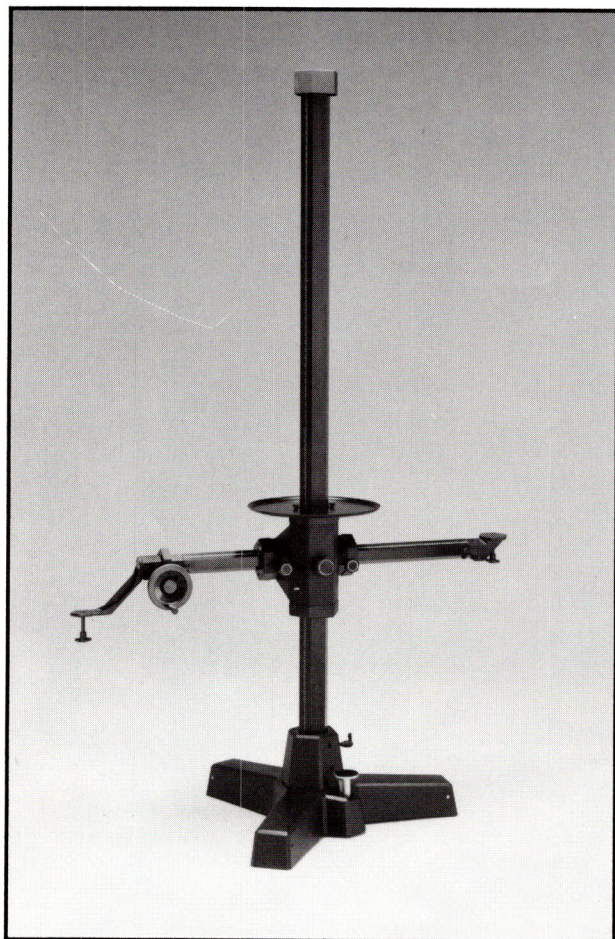
ASTIO

The Foba ASTIO stand is known worldwide as the finest studio stand on the market today. This Swiss manufactured stand features hexagonal profile column and cross arm for the ultimate in stability. With a standard height of 9ft, this stand offers silky smooth movements in all directions. These movements are achieved through the use of 24 adjustable roller bearings on each movement. The size of the vertical column is 4", and the size of the cross arm is 2 1/2". Weight 287lbs.

31-0129 .... **$5175.00**

ASTEO

Camera stand special order up to 11 feet, otherwise same as ASTIO.

31-0128 .... **$5290.00**

ASTIM

Motor-driven stand for smooth, electrically-operated vertical adjustments.

31-0125 .... **$8740.00**

ASTIE

ASTIO, with electronic vertical and horizontal scales, accurate to 1/100th of an inch for precise, repeatable positioning of the stand.

31-0133 .... **$9200.00**
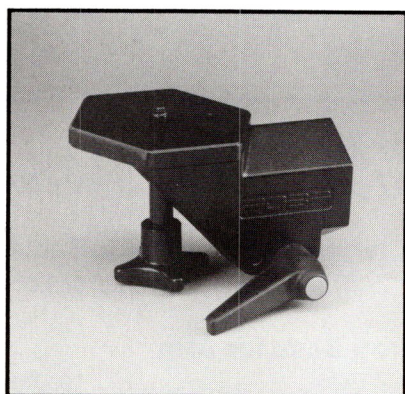
Camera Tilt Heads

Standard tilt head for use on the FOBA studio stands. Comes with 3/8" screw.

ASTIO Camera Tilt Head
31-0127 .... **$228.00**

ASABA Camera Tilt Head
31-0142 .... **$195.00**
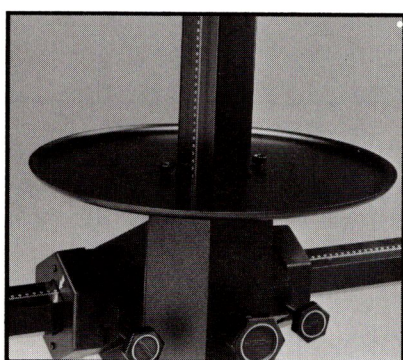
Accessory Trays

19" diameter metal tray for use on FOBA studio stands to hold meters, film holders, etc. Attaches by two locking screws.

ASTIO Accessory Tray
31-0126 .... **$145.00**

ASABA Accessory Tray
31-0143 .... **$145.00**

New!
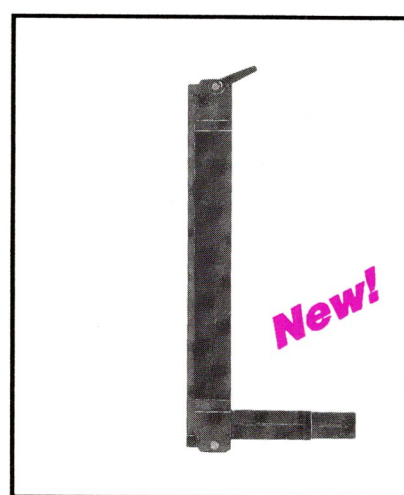
Low Position Arm

This new accessory further extends the versatility of the ASTIO Stand by allowing you to move your camera to within inches of the ground. Because of its weight, the arm cannot be used with the ASABA stand.

31-0132 .... **$349.00**

ASABA

The ASABA hexagonal studio stand features the larger ASTIO base (without the rotation collar), and both horizontal and vertical movements on 24 adjustable roller bearings. This stand comes standard in a 10' height and can be cut down ($50 charge) to whatever height the photographer needs. This stand is perfect for the 4x5 photographer who shoots occasional 8x10. Weight 220 lbs.
31-0140 .... **$2950.00**

Counterweights

Additional counter weight for use with the FOBA studio stands when used with heavier cameras.

ASTIO Counterweight 11lbs
31-0110 .... **$83.00**

ASABA Counterweight 7 lbs
31-0144 .... **$64.00**

Reducing Sleeve

For attaching the ASTIO gear head to an ASABA studio stand.
31-0145 .... **$42.00**

Adapter Sleeve

To use the ASTIO angle bracket on the ASABA studio stand.
31-0150 .... **$42.00**
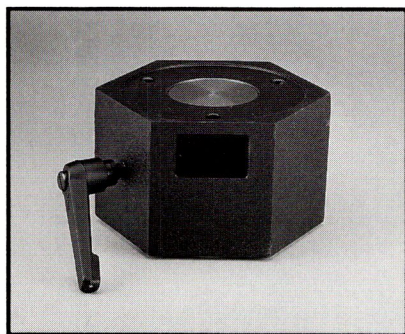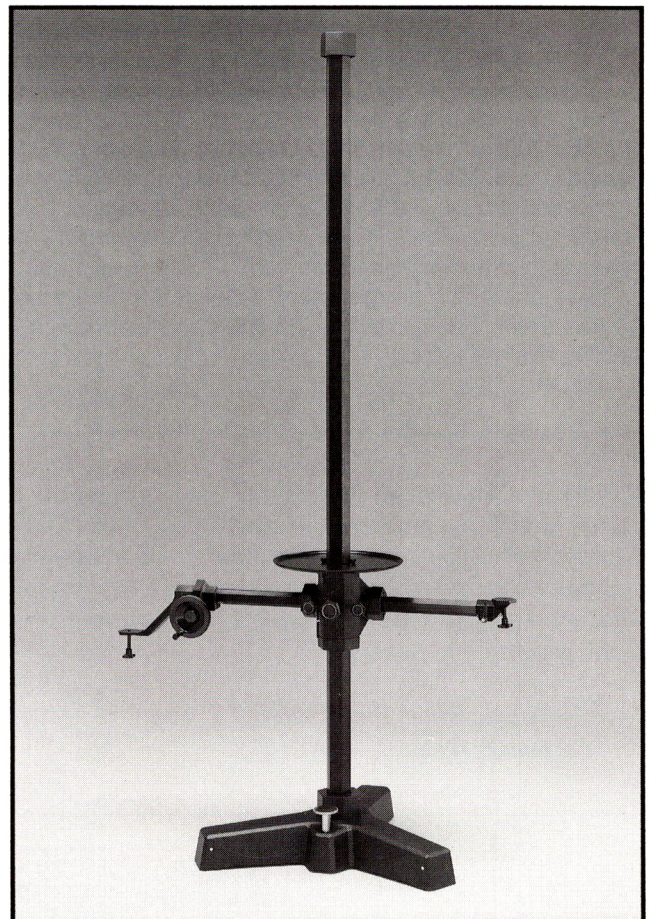
Rotating Column Flange

Provides center column rotation. For use on an ASABA camera stand.
31-0146 .... **$430.00**

Extension Arms

The arm adds 23 1/2" to the reach of your stand, so you can extend your camera out above the set with ease.

ASTIO Extension Arm
31-0134 .... **$297.00**

ASABA Extension Arm
31-0135 .... **$190.00**
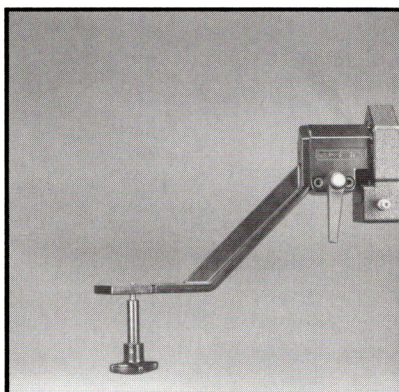
Angle Brackets

The Angle Bracket is used to offset the weight of heavy cameras for smooth tilt operation on either the gear head or crossarm. Only the ASTIO Angle bracket maybe used both the gear heads. The ASABA angle bracket mounts only to the ASABA crossarm.

ASTIO Angle Bracket
31-0109 .... **$344.00**

ASABA Angle Bracket
31-0111 .... **$344.00**
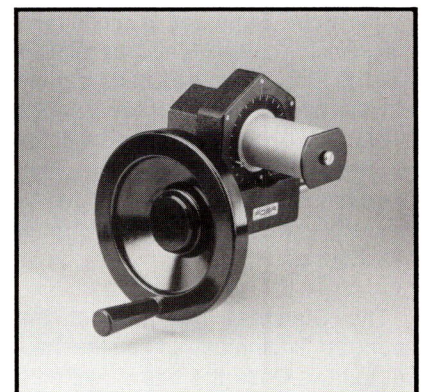
Gear Heads

The FOBA gear heads allow for fine gear driven adjustment of heavy cameras. The gear head requires the use of either a tilt head (31-0127) or an angle bracket (31-0109) on which to attach the camera .

ASTIO Gear Head
31-0106 .... **$830.00**

ASABA Gear Head
Includes adapter sleeve (31-0145).
31-0117 .... **$873.00**

FOBA Camera Stands

Lightweight Studio Stand

ASLOA Lightweight Studio Stand

Foba's new ASLOA stand provides an additional option for photographers who mainly shoot smaller formats, with some occasional 4x5. The center column is 78" high, and the sliding horizontal arm measures 32". The ASLOA's arm features two built-in camera plates with 3/8" screws. Add a Superball or a Pan-Tilt head for additional mobility and you're ready to go.

This stand uses the same ultra-stable hexagonal column construction as Foba's larger models. Vertical and horizontal movments glide on 24 roller bearings for smooth fingertip control.

Three cranks on the base allow you to lower wheels so you can move the ASLOA easily around your studio floor, and then lock it down again for total stability. Weight 132 lb.

31-0160 .... **$1699.00**
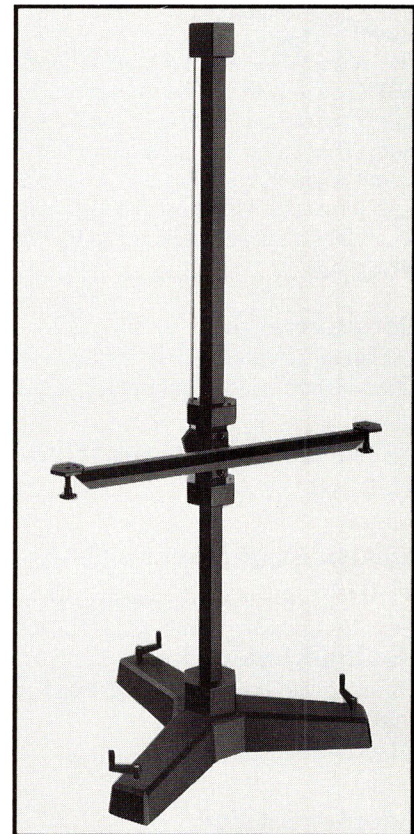
Foba equipment is invaluable. The combitube system is super handy, great to build supports with, or position fill cards or lights in odd places. Foba stands are great for animation or multi-image shots because I can move the camera so precisely. Why should I spend less for a lousy stand, when with Foba, I only have to buy once. After all, you get what you pay for.

— *Chris Lynch*
Cleveland, Ohio

FOBA Superball System

The Foba Superball is made with the precision of SINAR and the reliability of FOBA. This ball head comes with the largest range of accessories available. Whether you need a quick release plate, a normal camera plate (we offer both 3/8" and 1/4"), or even a Hasselblad plate, our Superball head has them all.

The Superball has one of the strongest fixation devices on the market today. Once the ball is locked it stays locked. But that's not to say you can't adjust the friction on the ball to suit your needs. Besides this, the base can rotate a full 360° and its tension is also adjustable.

SUPERBALL

**The precision of Sinar...
the reliability of Foba**

The all black anodized Superball.

Superball with Quick Release Head

This quick release plate allows you to change cameras quickly and easily with the twist of just one knob. There are five different types of quick release plates to choose from: 3/8", 1/4", 35mm, and Hasselblad 3/8" and 1/4".

33-0505 .... **$359.00**

Superball with 3/8" & 1/4" Standard Head

Can be used on all types of tripods and studio stands. Will take all of the accessories listed below.

33-0500 .... **$339.00**
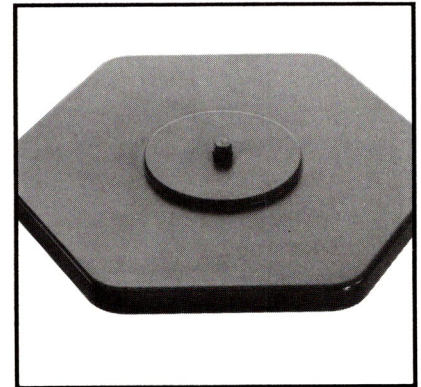
Base Plate

Attaches to the bottom of the Superball head. This allows the head to be used easily from a very low level such as the ground, or for table top use.

33-0507 .... **$95.00**
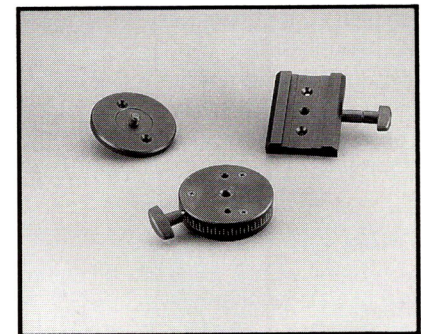
Universal Reversable Camera Plate

Has both 3/8" and 1/4" threads. Supplied with the standard Superball head (33-0500).

33-0511 .... **$48.00**

Quick Release Head

Can be added to the standard ball head as an option at a later date. Supplied with (33-0505).

33-0513 .... **$138.00**

Panorama Adapter

For use on either Superball. Allows rotation of the camera plate at any angle in addition to the base rotation.

33-0514 .... **$173.00**

Universal 1/4   Universal 3/8

Hasselblad 1/4   35mm   Hasselblad 3/8
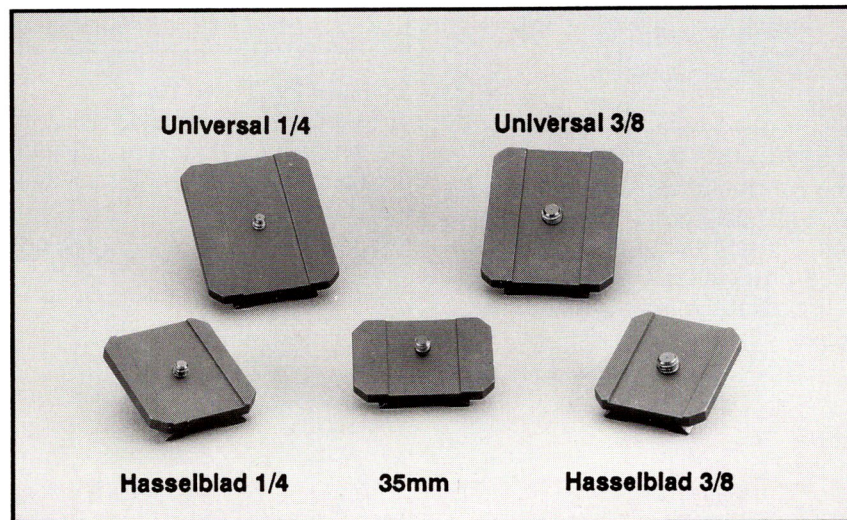
Quick Release Plates				
Type	**Thread**	**Cat. #**	**Price**	
35mm	1/4"	33-0508	$54.00	All Quick Release plates
Hasslelbad	3/8"	33-0509	$54.00	are designed for use
Hasselblad	1/4"	33-0506	$54.00	with the Superball Quick
Mamiya	3/8"	33-0515	$57.00	Release Head for easy
Universal	3/8"	33-0512	$48.00	mounting and removal of
Universal	3/8"	33-0510	$48.00	cameras.

Prices and specifications subject to change without notice.

FOBA
Superball

Alfao/Alfeo Tripod Combo
This Swiss high performance tripod is perfect for your medium or large format camera. This tripod will comfortably hold either a 4x5 or 8x10 camera. You can increase the basic height of the tripod to an almost unlimited height by using combitubes. This tripod consists of (31-0103) and (31-0102.)
31-0136 .... **$1100.00**

Alfao Tubular Tripod
Maximum height 58 1/2". Minimum height 30". With 3 section legs.
31-0102 .... **$625.00**

Crank Insert
Geared center column for the Alfao tripod. Can be extended 15".
31-0103 .... **$545.00**

Ballsocket Foot
31-0108 .... **$49.00**

Tripod Spike
31-0107 .... **$19.00**

Rubber Foot
Separate.
31-0124 .... **$9.00**

Tripod Carrying Case
31-0105 .... **$295.00**

Adapter for Camera
3/8" male to 3/8" male
31-0213 .... **$29.00**

Mini Universal Tripod
This versatile mini tripod (only 11" high) can be extended with combitubes for use on stairs or other uneven surfaces.
31-0123 .... **$395.00**
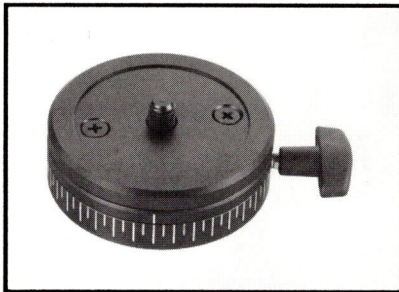
Panoramic Adapter
The panoramic adapter is a 360 degree rotatable collar which features both 3/8" and 1/4" threads. It can be used on the Alfao/Alfeo, Mini Universal tripod or any other tripod or camera stand.
31-0156 .... **$179.00**

Pan Tilt Head
Foba's pan tilt head for either their camera stands or tripods. Comes equipped with both 3/8" and 1/4" threads.
31-0119 .... **$495.00**

Double Pan Tilt Tead
The double pan tilt head is similar to the original head, but features an additional tilt movement for full 3-dimensional flexibility.
31-0118 .... **$690.00**

COKIT AS

The COKIT is the perfect accessory for all the FOBA background tables.

This combitube set consists of:
2- Aluminum combitube 16"
4- Joint sleeve
2- Combi clamp
1- Universal clamp
1- Universal sleeve
31-0253 .... **$325.00**

COBOX AF

FOBA's intermediate combitube set is ideal for both studio use and location shots.
6- Aluminum combitube 2'9"
4- Aluminum combitube 16"
4- Aluminum combitube 8"
4- Joint sleeve
2- Triple sleeve
2- Double sleeve
1- Universal clamp
1- Universal sleeve
5- Combi clamp
4- Rubber feet
31-0252 .... **$844.00**

COBOX AS

Same as above but in anodized black.
31-0255 .... **$850.00**

COSAT AS

Foba's combitube extension kit, to complete or add to existing equipment.
8- Aluminum combitube 2'9"
4- Aluminum combitube 16"
2- Aluminum combitube 8"
6- Joint Sleeve
2- Triple sleeve
2- Double Sleve
1- Universal sleeve
5- Combi clamp
1- Universal clamp
2- Flexible holder
2- Clamp to Flexible holder
4- Rubber feet
31-0256 .... **$1205.00**

Case to Combitube Set
31-0240 .... **$516.00**

Carrying Bag for Stands and Combitubes
31-0239 .... **$166.00**

The FOBA combitube system allows you to build an unlimited array of set-ups and configurations. This versatile system offers strength, durability and ease of assembly at a very reasonable cost.
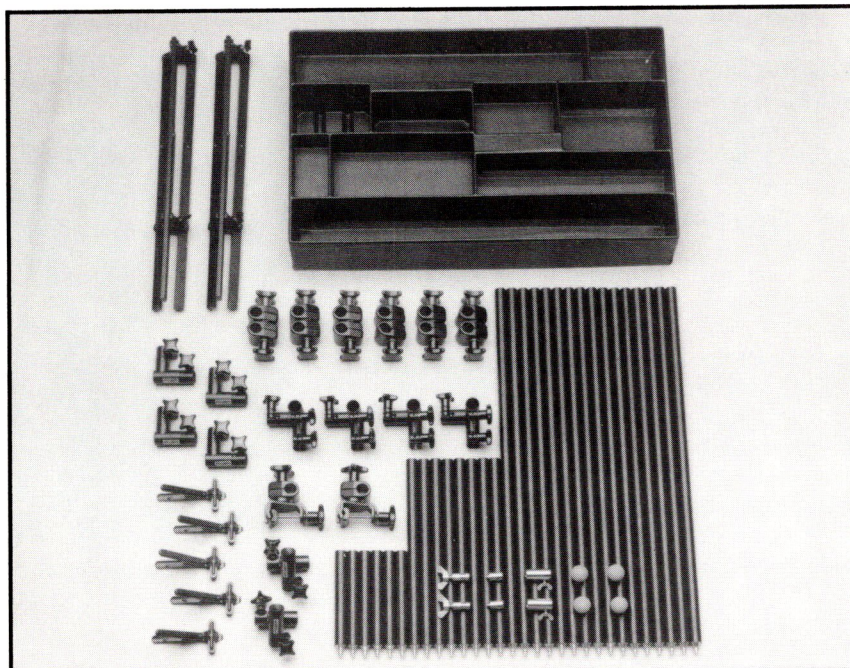
COSET AF

The largest of the combitube sets. The COSET will help eliminate the gaffers tape syndrome.
16- Aluminum combitube 2'9"
8- Aluminum combitube 16"
6- Aluminum combitube 8"
6- Joint sleeve
4- Triple sleeve
4- Double sleeve
2- Cross sleeve
2- Universal sleeve
5- Combi sleeve
2- Threaded sleeve adapter
2- Threaded bolt
4- Rubber foot
2- Aluminum folding stand
31-0241 .... **$1725.00**

COSET AS

As above, in anodized black.
31-0248 .... **$1775.00**

The Solution to the Gaffer's Tape Syndrome
Getting Creative with Combitubes

Photographers take great pride in their ability to improvise a creative solution. Indeed, the mark of a great shooter is his willingness to stretch the limits of practice, finding new ways to apply everyday tools.

But there's one area of practice in which improvisation results in wasteful, unproductive shooting. We're referring to the rigging and placement of lights, reflectors and the like, for which we turn to a catch-all category of studio gear called "grip equipment".

This unusual term has its roots in the early days of filmmaking, when the "key grip" and his "best boy" went around the set and placed the lights. From this tradition evolved specialized gear intended for the large-scale nature of studio filmmaking. Still photographers, meantime, made do with a ragtag collection of clips, clamps and assorted paraphrenalia they found at the local hardware store. When it came time for shooting, the still photographer found himself lashing together makeshift fixtures or staging, held together with rolls of gaffer's tape. All too often, the resulting setup took far too long to rig up, and worse, it looked amateurish and always seemed to fall over—or fall apart—at the wrong moment.

Problem Solver

With Foba combitubes and accessories, the still photographer has a universal grip "solution" that fills the gap between the overly-specialized gear used in filmmaking and the improvised gear used heretofore. A family of related components, based on interlocking, high-strength tubes, can fullfill just about any grip requirement, without requiring any tools or specialized assembly knowledge. The same building blocks can be configured into a large frame for a reflective screen or complex macrophotography staging. Flexibility of the system is limited, as the cliche goes, only by the imagination of the photographer.

Paradoxically, it is just this flexibility that causes a photographer to underestimate the combitube system. Until he sees how many problems can be solved with just a few key components, he may be tempted to stay with his gaffer's tape, or buy a Hollywood tool that only solves a specific problem.

So in this article let's review some of the things you can do with combitubes.

The Combitube System

The key component is the combitube itself. They come in lengths of 20, 40, 80 and 160 centimeters (8 to 64 inches). Construction is either a high-strength aluminum alloy or steel. The clever part of combitubes is the conical end fitting that screws into a corresponding female fitting on a second tube. This conical joint is self-seating and assumes tremendous stiffness with just hand tightening. Two combitubes screwed together feel like one continuous length of tubing.
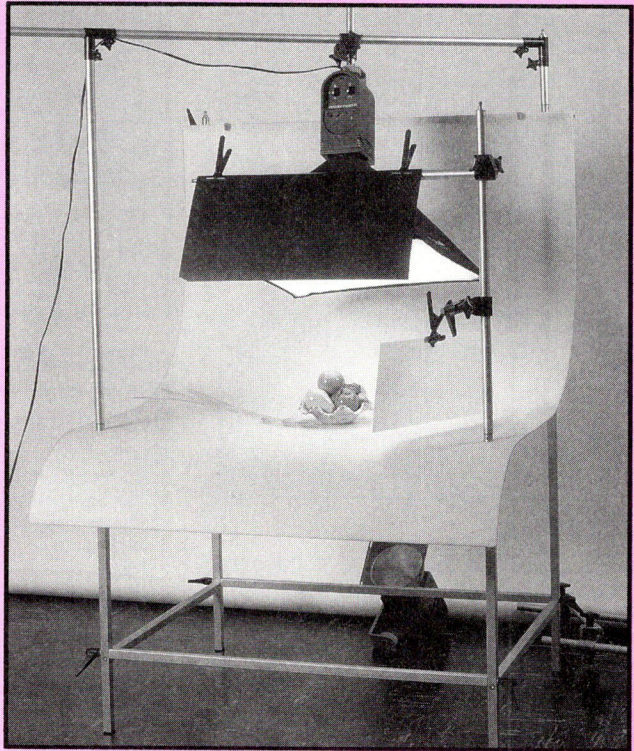
Combitubes used in combination with Dimil table present a clean and neat appearance in the studio. Overhead softbox is suspended over subject using double sleeve coupling and combitubes attached to table directly. Another combitube serves double duty by holding gobo using Combi clamps and joint sleeve; then a second joint sleeve holds fill card with assistance of universal clamp. This same setup would have needed at least three lightstands, a boom and counterweight, in addition to the four table legs.
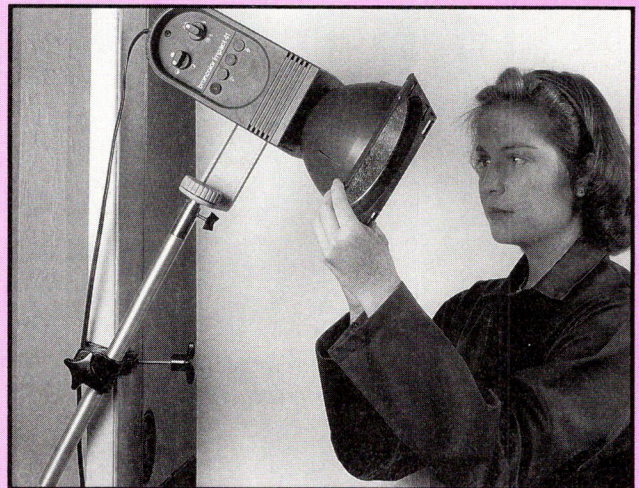
The universal sleeve attaches a combitube to a flat surface such as a door. Use this accessory for shooting tables in the studio.

Above: Combitubes used with joint sleeves can make up bridge-like structures of high stiffness. In this photograph a softbox is suspended from the center of a 10-ft. structure. Such an arrangement is inherently stable and far more secure than a boom and counterweight setup.
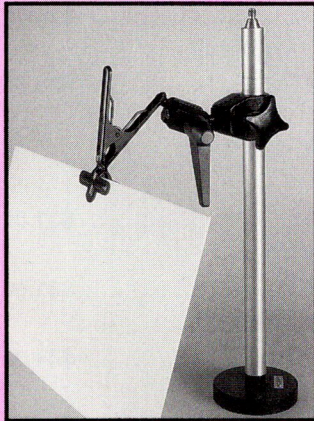
Left: Short combitube on universal base plus the universal clamp and joint sleeve makes a fully adjustable card holder for reflectors.
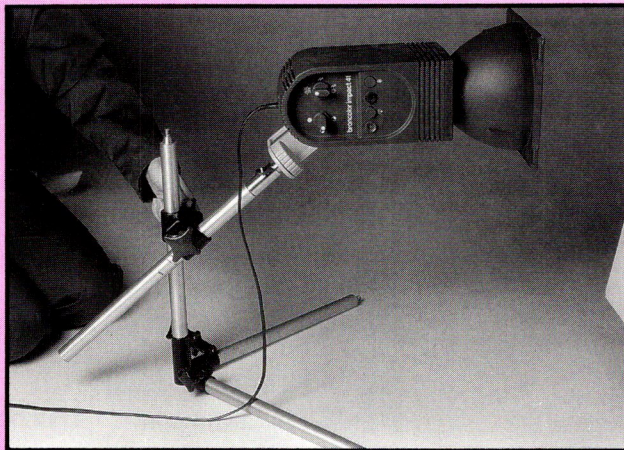
A triple sleeve, a joint sleeve and three short combitubes makes a useful low-angle lightstand.

So the first thing you learn about combitubes is that they can be fitted into each other to make any tubing length. Of course, this would be of limited value by itself. So the system includes numerous joining fixtures so you can assemble combitubes at right angles, at adjustable angles, with one tube crossing over another, with three tubes meeting at a common point, and a lot more. In other words, you can build any structure you can imagine. And as mentioned above, none of these fixtures requires any tools.

Once you have assembled a structure you will need to put something on it, over it, or across it and for this Foba has numerous clips, clamps and adapters.

The deceptively simple Foba clamp may resemble the woodworker's spring clamp found in the hardware store, but it works far better. One side of the clamping jaws are rounded to fit the radius of a combitube exactly, so you can clamp it around a tube without worrying about it snapping off. The jaws are also wide, so they grip flats and cards along a wide surface for extra friction. The flat jaw has a hook stamped into it so you can hang wires or paper "sweeps". A half-dozen Foba clamps will find daily use in your studio holding reflector flats, cloth scrims, gobos, fishlines and more. Once you get used to using Foba clamps you will have a hard time indeed going back to those orange-handled spring clamps.

Elegant Solutions

Combitubes are also an ideal way to hang lights. A special adapter accepts a combitube at one end and lets you fit the common electronic flash heads at the other. Let's say you are doing tent lighting, with flash heads needed all around the tent. Of course, you could drag out a half dozen or more light stands and put a head on each at the right spot. But look at what your set would look like, all cluttered, with no less than 18 stand legs bumping into you and your subject.

The combitube approach would start by building a square structure around our light tent, or perhaps we would build the tent itself from combitubes. From the four sides of our structure we would add short lengths of combitubes at right angles, and equip these short lengths with the proper flash adapter on the end. Then we could aim as many lights as needed into the tent, with the combitube structure acting in effect like one large, "circular" lightstand. This is a neat and elegant approach to a messy problem.

Actually, every photographer has different grip problems to solve, and this is why the combitube system is so useful. A good way to get started is to buy one of the pre-configured kits made up by Foba. Once you get the basic components in your hands, you will find new ways to use them. You'll be adapting a universal solution to your own particular problems, and getting a kick out of your own creativity. After a short time, you'll be adding the specialized pieces that eliminate improvised arrangements once and for all.

FOBA Combitube System
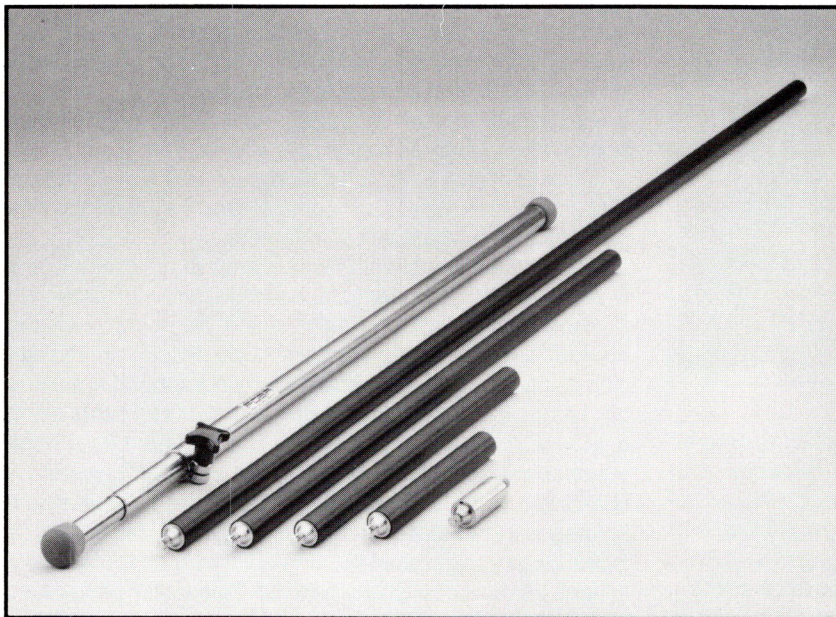
8" Combitube
Steel
31-0214 .... **$22.00**
Aluminum
31-0215 .... **$22.00**
Aluminum black
31-0216 .... **$22.00**

16" Combitube
Steel
31-0225 .... **$26.00**
Aluminum
31-0226 .... **$26.00**
Aluminum black
31-0227 .... **$28.00**

2'9" Combitube
Steel
31-0234 .... **$31.00**
Aluminum
31-0235 .... **$31.00**
Aluminum black
31-0236 .... **$34.00**

5'4" Combitube
Steel
31-0228 .... **$52.00**
Aluminum
31-0229 .... **$52.00**
Aluminum black
31-0230 .... **$58.00**

2" Coupling Piece
Steel
31-0245 .... **$22.00**
Aluminum
31-0246 .... **$22.00**
Aluminum black
31-0247 .... **$22.00**

Spring Tension Tube
31-0218 .... **$122.00**
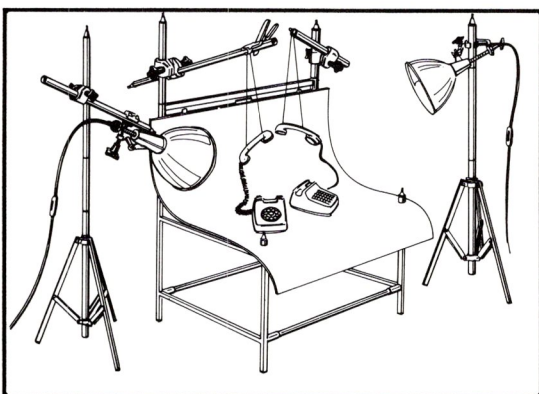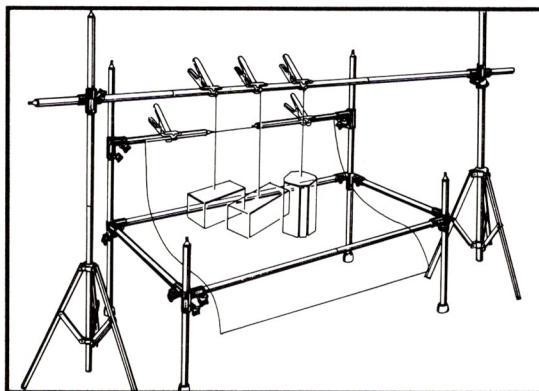
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- Authorized Dealers

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17 Progress St.
Edison, NJ 08820
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- Product Literature
- View Camera and Lighting
  Workshops
- Technical Support

FOBA Combitube System Accessories
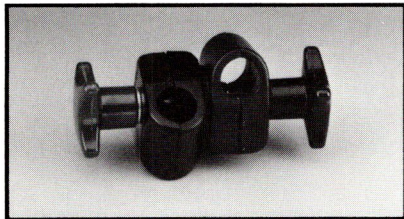
Joint Sleeve
#31-0220
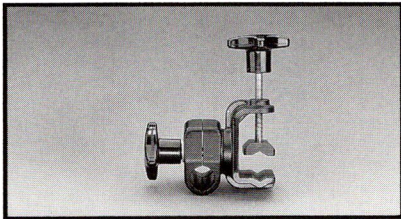
Universal Sleeve
#31-0219

Double Sleeve
#31-0217
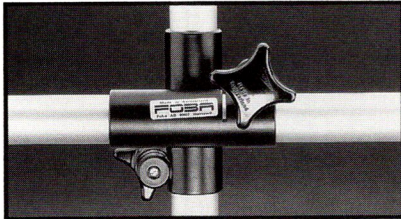
Cross Sleeve
#31-0237
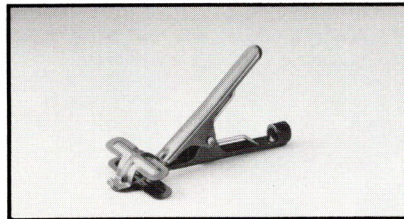
Combi Clamp
#31-0232
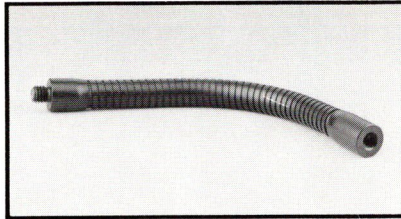
Flexible Holder
#31-0250
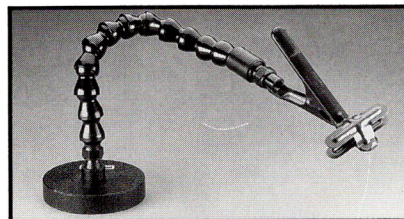
Flexible Holder II
#31-0258
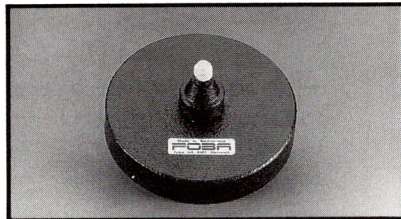
Universal Table Base
#31-0260

Triple Sleeve
#31-0244
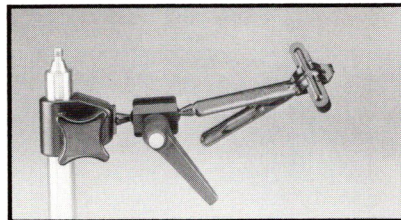
Universal Clamp
#31-0251
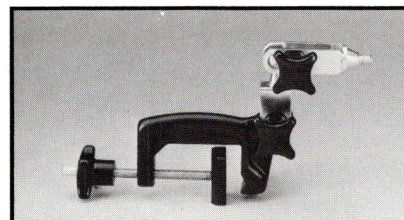
Clamp Rod
#31-0208
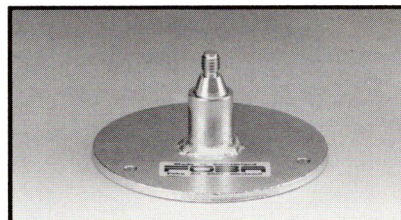
Threaded Flange
#31-0201

Joint Sleeve
Movable jointed sleeve.
31-0220 .... **$47.00**

Universal Sleeve
Attaches to almost anything, allows you to build with combitube.
31-0219 .... **$87.00**

Double Sleeve
31-0217 .... **$47.00**

Cross Sleeve
31-0237 .... **$48.00**

Combi Clamp
Attaches to the flexible holder so that a screen or gobo can be held into place.
31-0232 .... **$21.00**

Flexible Holder I
Attaches to the end of a piece of combitube, it can be used with the combi clamp to hold boards, etc.
31-0250 .... **$43.00**

Flexible Holder II
Attaches to either the end of a piece of combitube or the universal base stand, it can be used with the combi clamp to hold boards, etc. Shown w/31-0232 & 31-0260.
31-0258 .... **$49.00**

Universal Table Base
Used for table top photography, this 4" diameter 2.5 lbs base is for use with either flexible holder or small combitubes.
31-0260 .... **$65.00**

Triple Sleeve
31-0244 .... **$71.00**

Universal Clamp
Double jointed clamp that attaches to combitubes to hold gobos in place.
31-0251 .... **$86.00**

Clamp Rod with Double Joint
Universal attachment for combitubes.
31-0208 .... **$80.00**

Threaded Flange
For wall or ceiling mounting allowing combitube to be mounted at the end of this unit.
31-0201 .... **$38.00**

FOBA Combitube System

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FOBA Combitube System Accessories

Counterweight Complete
For use on combitubes.
31-0204 .... $99.00

Additional Weight
For above.
31-0205 .... $54.00

Locking Ring
Replacement locking ring.
31-0203 .... $15.00

Combitube Double Holder
31-0206 .... $99.00

Clampholder to Combitubes
Allows you to mount flash heads to combitubes. Requires adapter (31-0202).
31-0209 .... $140.00

Hanging Device for Combitubes
Fits the threaded sleeve adapter (31-0207).
31-0210 .... $22.00

Universal Base Stand
Base for mounting combitubes onto for use as a light stand, etc.
31-0211 .... $122.00
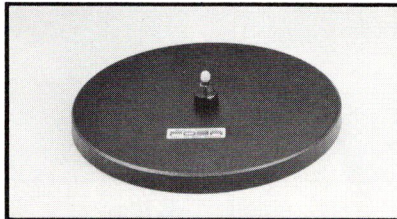
Additional Weight
For the universal base stand.
31-0257 .... $91.00
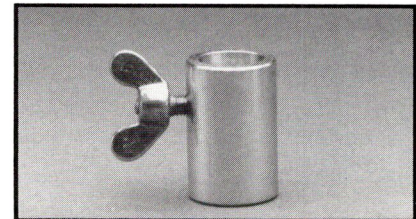
Threaded Sleeve Adapter
31-0301 .... $16.00

Rubber Foot for Combitube
To prevent combitubes from scratching your floors.
31-0324 .... $9.00

Combi Clamp Set of 5
31-0223 .... $65.00
Set of 10
31-0224 .... $99.00

Caster for Combitubes
31-0231 .... $39.00

Forked Support
Fits the threaded sleeve adapter.
31-0238 .... $23.00

Counterweight
#31-0204

Additional Weight
#31-0205

Locking Ring
#31-0203

Combitube Double Holder
#31-0206

Clampholder
#31-0209

Hanging Device
#31-0210

Universal Base Stand
#31-0211

Threaded Sleeve Adapter
#31-0301
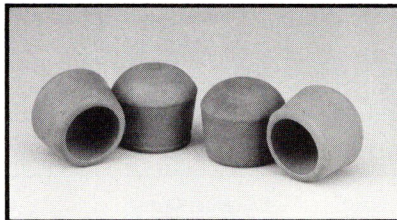
Rubber Foot
#31-0324
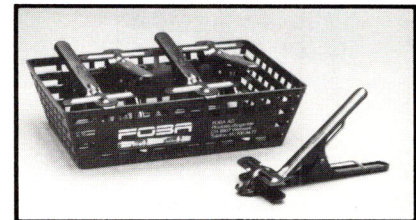
Combi Clamp
#31-0223
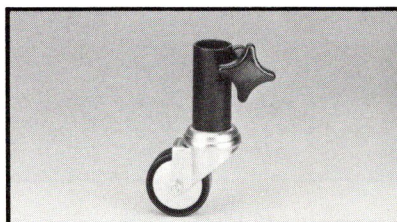
Caster for Combitubes
#31-0231
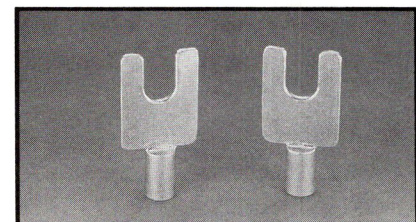
Forked Support
#31-0238

FOBA Combitube System Accessories
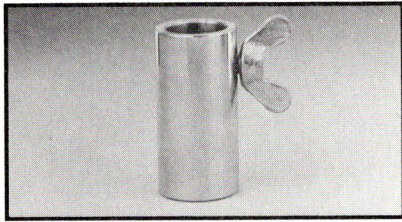
Threaded Sleeve Adapter
#31-0207
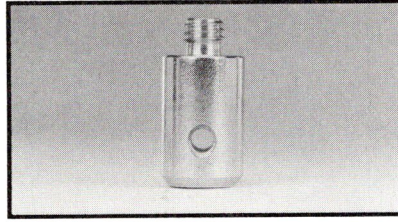
Threaded Bolt 3/8
#31-0202
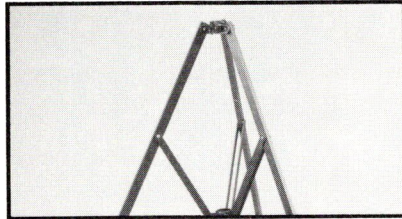
Aluminum Folding Stand
#31-0249
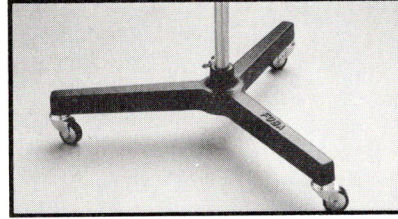
Caster Stand
#31-0906
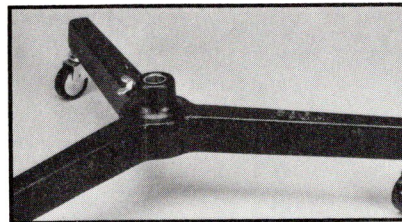
Caster Base
#31-0212

Caster Base
Three-legged caster base for use with larger lighting units. Requires the use of the 30mm tube (31-0901).
31-0212 .... **$310.00**
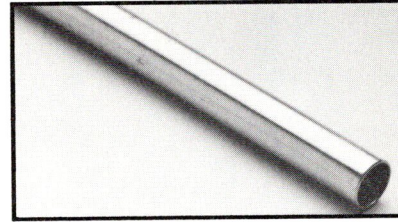
Large Tube
#31-0901

Large Tube, 30mm diameter
6 1/2' tube that fits the caster stand (31-0212).
31-0901 .... **$67.00**

Threaded Sleeve Adapter
Fits onto the end of a combitube so that accessories can be attached to it with the proper adapter.
31-0207 .... **$16.00**

Threaded Bolt 3/8"
Used with 31-0207, 31-0209 or 31-0902.
31-0202 .... **$14.00**

Aluminum Folding Stand
Lets you use either the combitube or telescopic extensions a light stand.
31-0242 .... **$79.00**

Aluminum Folding Stand black
31-0249 .... **$88.00**

Heavy Duty Folding Stand
31-0243 .... **$149.00**

Caster Stand
6 1/2 ft height with large caster base (31-0901) and 30mm dia. tube (31-0901). Needs Clampholder (31-0901) and Adapter (31-0202).
31-0906 .... **$360.00**

Clampholder
Fits tube (31-0901).
31-0902 .... **$148.00**

Copy Stands

Copy Stand
The Foba copy stand uses the same design principles as the FOBA studio stands. The column's hexagonal shape along with 24 ball bearings on the movements make this stand the smoothest and most flexible available today. Height approx. 56". Requires Baseboard (31-0881).
31-0880 .... **$2989.00**

Weight Assembly
31-0882 .... **$182.00**

Baseboard
Complete with combitube connectors.
31-0881 .... **$770.00**
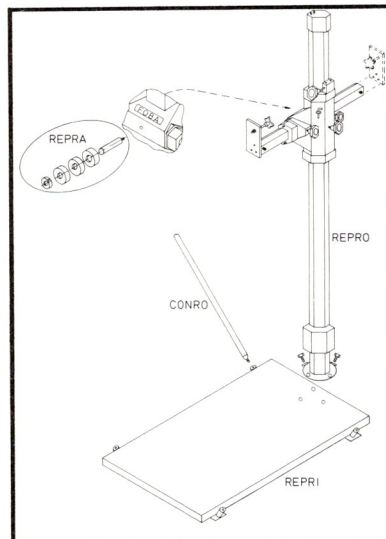
Gobo Holder
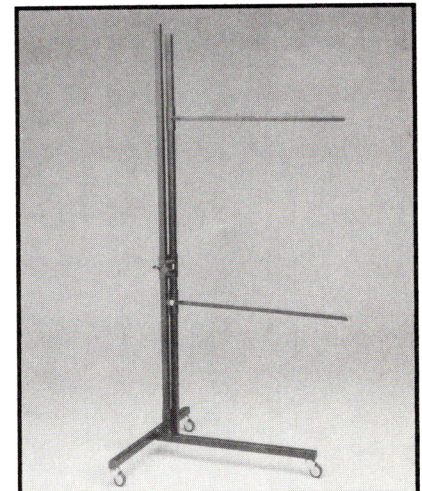
Reflo
Stand to hold large reflector boards.
31-0818 .... **$459.00**

DIMIL

This FOBA light table comes with a large 69" long by 48" wide color correct 1/4" plexi plate that has a **preformed front curve** built in. Its sand blasted surface allows for reflection free photography, and there are no visible crossbars to prevent you from shooting into the curve.

Along with these features this table allows you to attach the versatile combitube system directly onto the table for added flexibility.

31-0333 .... **$870.00**

Formica Adapter

Use 4x8 surface material on the aluminum frame.

31-0332 .... **$488.00**

Aluminum Frame

31-0320 .... **$488.00**

DIMIL Formica Table

The aluminum frame and formica adapter used in combination is the ideal support for your own 4x8' surface material such as formica or plexiglass.

31-0321 .... **$595.00**

Plexiglas Replacement

31-0309 .... **$574.00**

Casters

31-0233 .... **$73.00**

FOBA light tables allow you to photograph objects on a shadow free background.
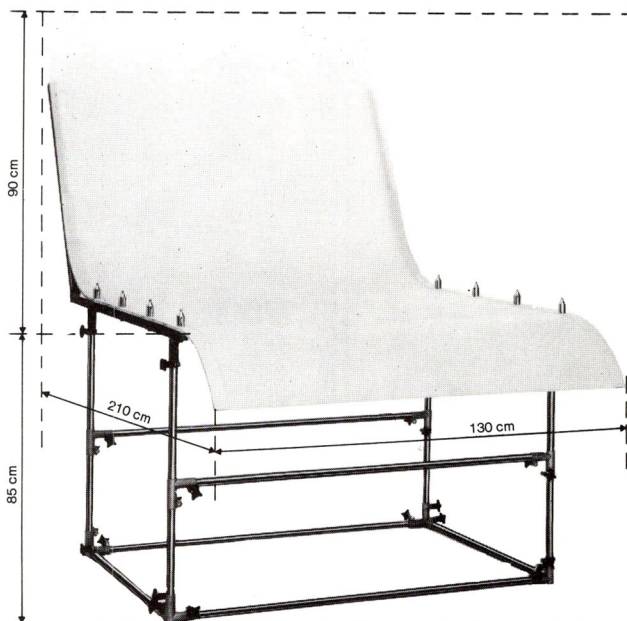
DIGRO

Foba's largest light table with curved front. Size of plexi plate 51" wide x 82" deep x 35" high.

31-0318 .... **$2874.00**

Caster

Allows your shooting table to be easily moved anywhere in the studio.

31-0231 .... ea. **$39.00**

Plexiglass replacement

31-0325 .... **$1664.00**

Brackets replacement

Set of 2

31-0326 .... **$499.00**

DIBRO

Same as DIGRO, 63" wide.

31-0351 .... **$3449.00**

FOBA Light Tables

DIMIO

This newest FOBA table was designed for table top photography. It is adjustable in both height and tilt angle. The frame of the table can be placed vertically for use as either a reflector or light diffuser. There is also a background roll holder for background paper. An optional sandblasted diffusion plate is available.

31-0327 .... **$1499.00**

Combi Connectors

Set of 3 for DIMIO. Allows you to use your FOBA combitubes with this table.

31-0343 .... **$54.00**

Deposit Basket

To hold accessories under the table.

31-0344 .... **$51.00**

Opal Diffusion Plate

Sandblasted and color correct 53" x 47" plexi for use on the DIMIO table.

31-0345 .... **$311.00**
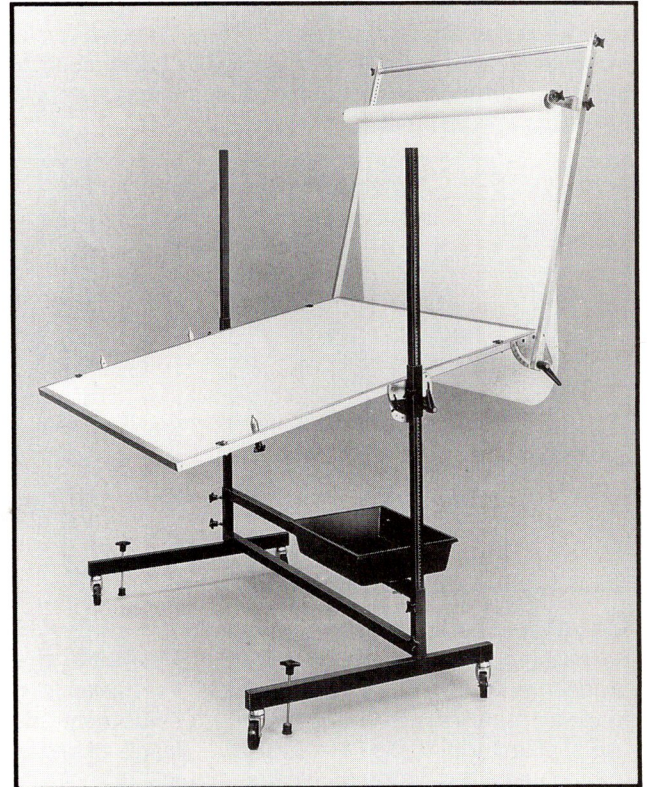
Table	Shooting Surface			Combi Connections	Casters	Additional Features
	Width	**Depth**	**Height**			
DIMIL	48"	43-69"	33"	4	Opt.	Back adjustable 90°, up to 82 high. Curved front, no crossbars under plex.
DIGRO	51"	84"	34"	8	Opt.	Back 38" high, curved front, no crossbars under plexiglass surface
DIMIO	54"	48"	adj.	6 (opt.)	Yes	Table angle adjustable. Can hold seamless paper adjustable over 90°.

Light Cones

Plexiglas Cone - large

Used for tenting small products. Base diameter 19.5", height of 19.5".

31-0340 .... **$344.00**

Plexiglass Cone - small

Base Diameter 7 3/4", Height 8.5".

31-0341 .... **$125.00**
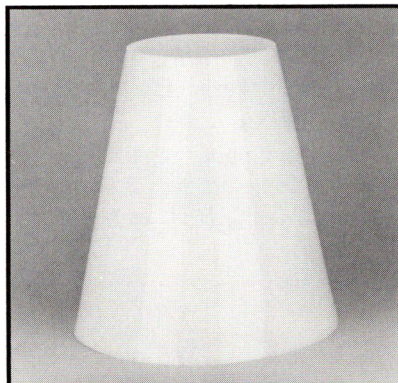
FOBA light cones are used to provide soft, diffused lighting from all directions for small-product photography. Because the subject is surrounded by the cone, all reflected highlights appear clean white without the problem of objects in your studio showing up in reflections. Perfect for jewelry and other small, reflective objects.

FOBA background supports are the perfect studio accessory for any photographer who uses background paper. Three different versions are available. Two movable stands provide easy access to background paper anywhere in the studio, and a motorized wall mount support system allows easy loading and unloading of paper rolls.
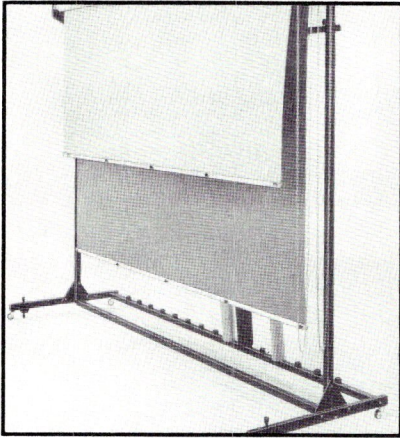
Movable Stand
For background paper. Stores 15 rolls of paper vertically. Two additional rolls are always ready to use. Requires the use of clamp with brake (31-0305) to roll and unroll the background paper. Other recommended accessory is the trailing edge (31-0314).

31-0315 .... **$1515.00**
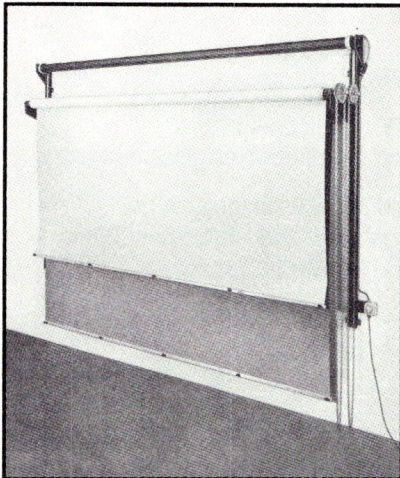
Motorized Wallmounted Background Stand
Raises and lowers the background paper for ease of changing the background rolls. Requires the use of the clamp with brake (31-0305).

31-0357 .... **$1478.00**
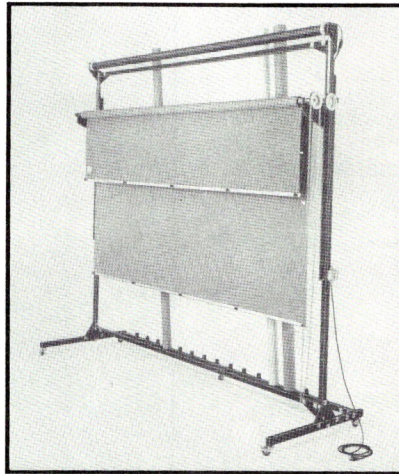
Movable Stand
For background paper with the height adjustment motorized. Holds 10' length of paper. Requires the use of the clamping device (31-0305).

31-0355 .... **$3054.00**
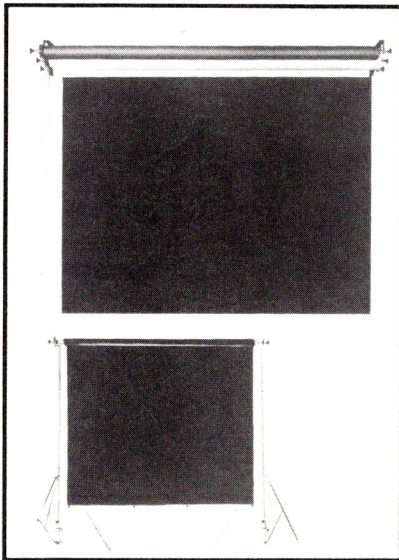
Wallmounted Background Stand
For 3 rolls of paper consisting of: 1-set of Triple bracket, 3-Clamp with brake (31-0305), 3-Trailing edges (31-0314).

31-0348 .... **$919.00**

Triple Bracket for Wallmount
Set of 2.
31-0331 .... **$92.00**

Single Brackets
Set of 2.
31-0329 .... **$48.00**

Clamp with Brake
Consists of 2 clamp inserts (31-0304) for cardboard tube, Chainwheel (31-0339), Chain (31-0338) and Brake Device (31-0302).
31-0305 .... **$225.00**

Same as above but without chain and chain wheel.
31-0304 .... **$147.00**

Chain only
31-0338 .... **$38.00**

Chainwheel only
31-0339 .... **$32.00**

Brake Device
To keep paper in position.
31-0302 .... **$26.00**

Trailing Edge
For paper 9' wide.
31-0314 .... **$79.00**

Trailing Edge
For paper 11.5' wide
31-0312 .... **$150.00**

Roof Track Systems

When it comes to ceiling rail systems, FOBA wrote the book. Whether you need a large overhead system for car photography, or a lightweight ceiling rail system for people, FOBA has the system for you.

The traditional rail system is custom designed for your studio. We can help you design a system perfect for the type of photography you do. These systems can hold any type of light source from a single head to a giant light bank.

They can be operated either manually or fully automatically by infrared Servor control.

If you are tired of tripping over light cords and not having enough room to move in your studio, please give us a call and let us design a system for you.

The FOBA Roof Track system is an easy way to expand your studio square footage without moving! Imagine the amount of space to be gained just by eliminating light stands from the studio floor. Let alone the lamphead cables that you have so often tripped over.

When compared to the cost of just a few light stands and a couple of boom arms this system is relatively inexpensive.

You can choose from three basic kits or build your own custom system, and the installation is just as easy. If you need help in choosing the correct system just call your local FOBA dealer or Sinar Bron and we will be glad to discuss your Foba rail system.
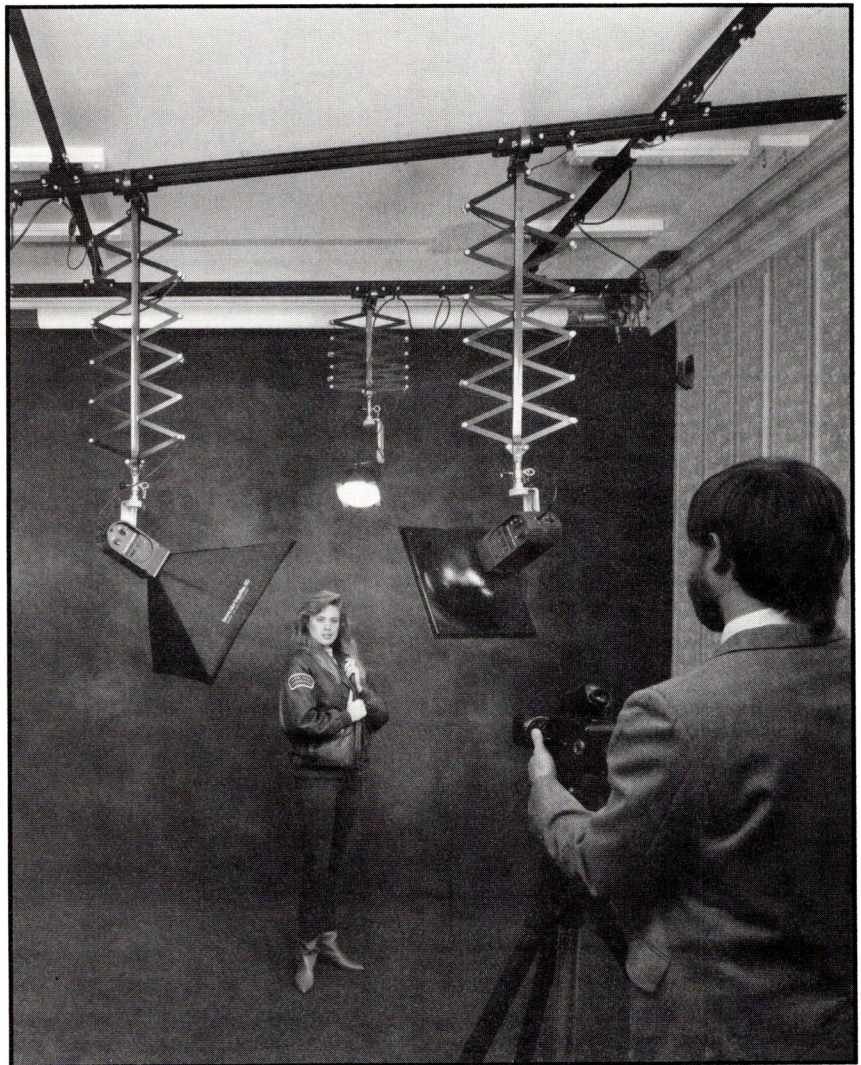
MINI-KIT (10x10')
Consists of:
4   32-0610 10' rails
8   32-0638 Endbuffers
4   32-0630 Cross trollys
2   32-0651 Scissors
2   32-0624 Scissor trollys
3   32-0639 Roof mount, set of 2
2   32-0635 Cable holder set of 4
2   32-0678 Universal adapters
32-0133 .... $1490.00

PROFI-KIT (10x10')
Consists of
4   32-0610 10' rails
4   32-0630 Cross trollys
3   32-0651 Scissors
3   32-0624 Scissors trollys
8   32-0638 Endbuffers
4   32-0639 Roof mount set of 2
3   32-0635 Cable holder set of 4
3   31-0678 Universal adapters
32-0232 .... $1950.00

MAXI-KIT (10x20')
Consists of
2   32-0620 20' rails
3   32-0610 10' rails
8   32-0638 Endbuffers
6   32-0630 Cross trollys
4   32-0651 Scissors
4   32-0624 Scissor trollys
5   32-0639 Roof mounts set of 2
4   32-0635 Cable holder set of 4
4   31-0678 Universal adapters
3   32-0649 24 lbs springs for scissors
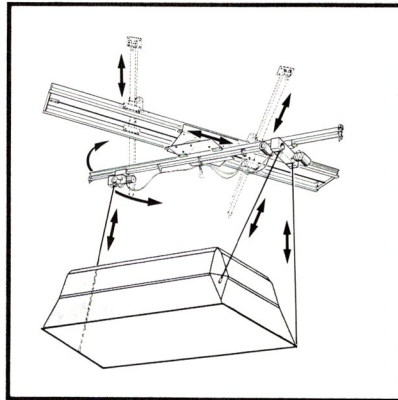32-0336 .... $2850.00
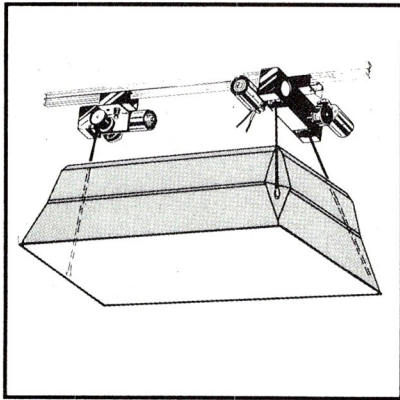
Simple Light Suspension Kit

For lamps and banks up to 55 lbs, this is the most economical vertically motorized suspension option for the Mini-Cumulite or comparably-sized softboxes and lightbanks. Horizontal movements along the rail are manual, and there is no rotation.

Includes:
 Single motor group (cable length 13.5')
 Double motor group (cable length 13.5')
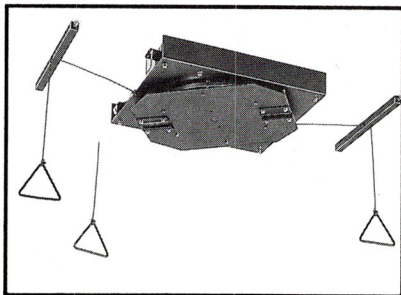 4 Channel power control unit
 Carriage

13-4010 .... **$975.00**

Manual Rotation Kit

The Rotation Kit can be added to the Simple Suspension Kit to allow manual rotation of the light unit on a 6.5' rail. Connects to 2 parallel rails which must be joined with the spacers provided. The rotating rail is fixed to the lower part of the plate.

Includes:
 Rail spacers (2)
 Rope with handgrips (3)

32-0666 .... **$427.00**

Motorized Rotation Kit

Same as above but with the rotation motorized. Requires the use of either the 4 or 8 Channel Power Control Unit.

32-0667 .... **$786.00**

Light Suspension Kit with Rotation

Same as the Bank Light Suspension kit, with the up and down movements motorized, and manual rotation.

Includes:
 Single motor group (cable length 13.5')
 Double motor group (cable length 13.5')
 Rotation kit
 4 Channel power control unit
 6.5' Rail
 Endbuffers
 Carriage

 Cable holders

13-4011 .... **$1699.00**

To increase flexibility in choosing the correct suspension system, both the Bank Light Suspension Kit with Rotation and the Fully Motorized Suspension Kit does not include the two parallel rails or the cross carriages, since the size and quantity needed depend on the size of the rail system required.

Fully Motorized Suspension Kit

For the Broncolor Mini-Cumulite or any soft box, for use with the Foba Mini Rail system. Roof Top Twist allows full motorization of all movements (up-down, right-left, forward-backward, and rotation.) Movements are operated by a cable remote. Ideal for any large bank light weighing up to 55 lbs. This kit includes enough cross trollys for mounting on two rails.

Includes:
 Single motor group (cable length 13.5')
 Double motor group (cable length 13.5')
 Motorized rotation kit
 8 Channel power control unit
 6.5' Rail
 Endbuffers
 Carriage
 Cable holders
 Double brackets fortwist super (2)
 Motorized carriage (2)

13-4012 .... **$2699.00**

Special Cross Trolly for the Motorized Suspension System

Should be used when the system is connected to three or more main rails.

32-0668 .... **$62.00**

Motorized Cross Trolly for the Motorized Suspension System

Additional motors should be used when the system is connected to four or more main rails.

32-0669 .... **$175.00**

Financing

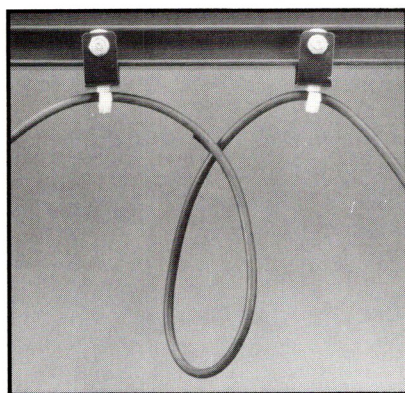New and Expanded
Up to 60 months
Financing Available

At Competitive Rates!
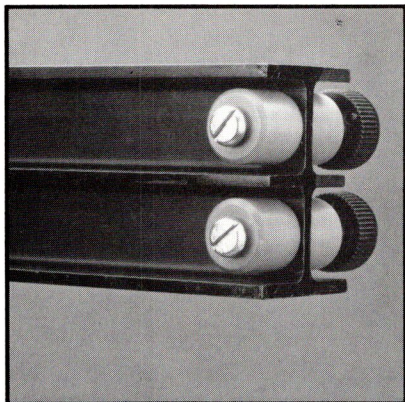
Endbuffer

Set of 2. An endbuffer must be mounted at both ends of each rail section to prevent equipment from sliding off.

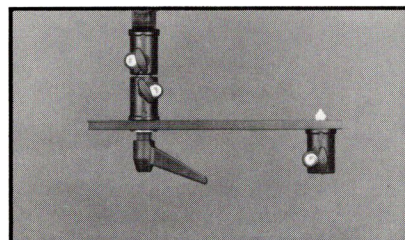32-0638 .... **$17.00**

Cable Holders

Set of 4.

Clips will hold cable up to 1/2" diameter. The power pack or light is positioned at the point furthest away, hang and hook up the cable to the cable holder at the endbuffer of the rail. Distribute the 4 cable holders along the rail and hook the cable to each one of these.
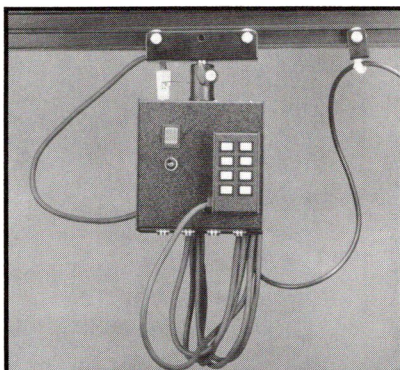
32-0635 .... **$44.00**

Balance Adapter

Has female attachment to be fitted between pantograph and unbalanced lighting fixtures or other appliances.

32-0657 .... **$51.00**

Power Control Unit

To control motorized carriages, pantographs and suspension systems. This unit comes complete with a hand held remote unit that may be attached to any ferrous surface via a magnet on the back side. 24Vdc output.

4 Channel Power Control Unit

32-0654 .... **$300.00**

8 Channel Power Control Unit

32-0665 .... **$385.00**

Motorized Trolly

Allows motorized movements of pantographs along the rail. Requires 1 channel of either the 4 or 8 Channel Power Control Unit.

32-0658 .... **$262.00**
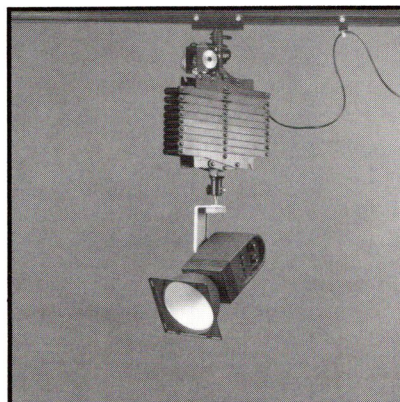
Motorized Scissors Extension

This pantograph is extendable from 16 to 102", and comes complete with trolly. The pantograph will handle up to a 40 lb load. This unit requires the use of one channel on the power control unit.

32-0653 .... **$470.00**
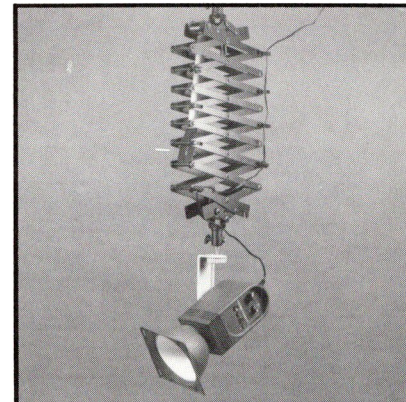
Scissors

Extendable from 12"to 86". Includes Spring A for max. load of 8.8 lbs. Additional springs may be added for lamps up to 48.5 lbs.

32-0651 .... **$295.00**

Spring A (8.8 lbs.)

32-0648 .... **$35.00**

Spring B (24.3 lbs.)

32-0649 .... **$73.00**

Trolly for Scissors Extension

32-0624 .... **$46.00**

Spring Combinations	
1 A	8.8 lbs
2 A	17.6 lbs
1 B	24.25 lbs
1 A & 1 B	33 lbs
2 B	48.5 lbs

FOBA
Roof Track
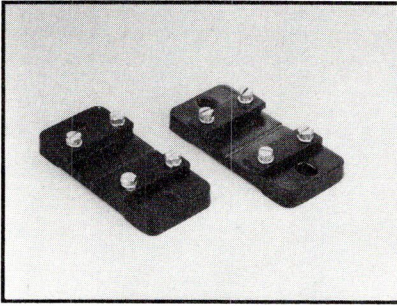
Roof Mount

Set of 2. Mounts rail section onto ceiling. It is advisable to attach mount to rail on the ground and then attach roof mount to ceiling with rail section attached.

32-0639 .... **$38.00**

Roof Track Rails, black 🚚

6.5'
32-0606 .... **$75.00**
10'
32-0610 .... **$97.00**
13'
32-0613 .... **$149.00**
20'
32-0620 .... **$190.00**

Cross Trolly

To install cross rails onto main rails.

32-0630 .... **$54.00**

Cross Trolly Special

To put roof track onto steel main rail.

32-0631 .... **$227.00**

Trolly for Adapters

32-0632 .... **.$47.00**

Trolly with Combitube Adapter

Allows installation of combitubes on Roof Track System

32-0641 .... **$49.00**
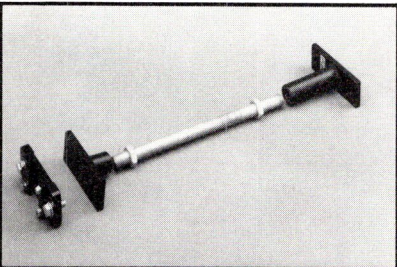
Adjustable Bracket

For use with an uneven ceiling, the bracket allows adjustment of the roof mounts so that they are level. Requires the use of the threaded bar.

32-0636 .... **$78.00**

M16 Threaded Bar (39")

For use with the adjustable bracket.

32-0637 .... **$34.00**
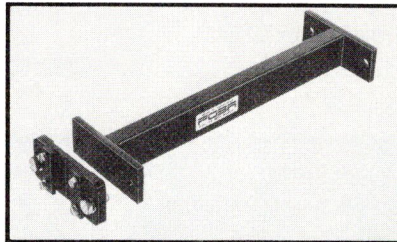
Extension Bracket

Using extension brackets enables rail system to be mounted at a fixed distance from the ceiling to allow for ducts, pipes and other obstructions. Custom lengths from 4"-20".
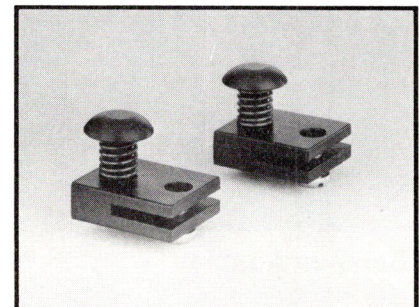
32-0642 .... **$54.00**
Custom made from 21"-39".
32-0643 .... **$46.00**
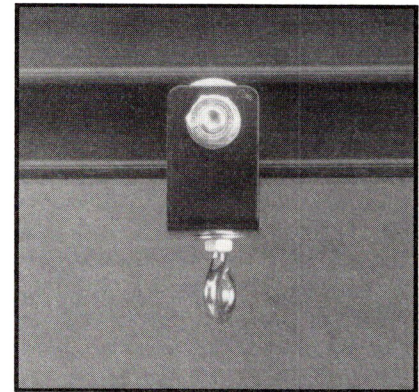
Cable Holder with Hook

32-0634 .... **$13.00**

Brake, set of 2

32-0640 .... **$24.00**
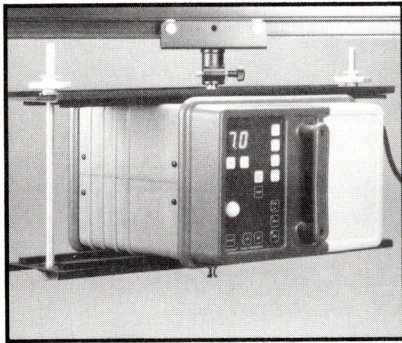
New!

All Roof Track Trollys and Suspension Systems now feature metal ball bearing rollers for extra strength and stability

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Roof Track Systems

Power Pack Holder
Power pack rests on platform which is attached to rail system with 3/8" spigot. This will hold a pack up to 17" wide and 9" high. Requires (32-0624) and (32-0627).
32-0626 .... **$90.00**

5/8" Female to 5/8" Female Adapter
Allows the power pack holder to be mounted directly to the trolly (32-0624)
32-0627 .... **$22.00**

Combitube

Broncolor

Universal

Broncolor Adapter
32-0671 .... **$23.00**
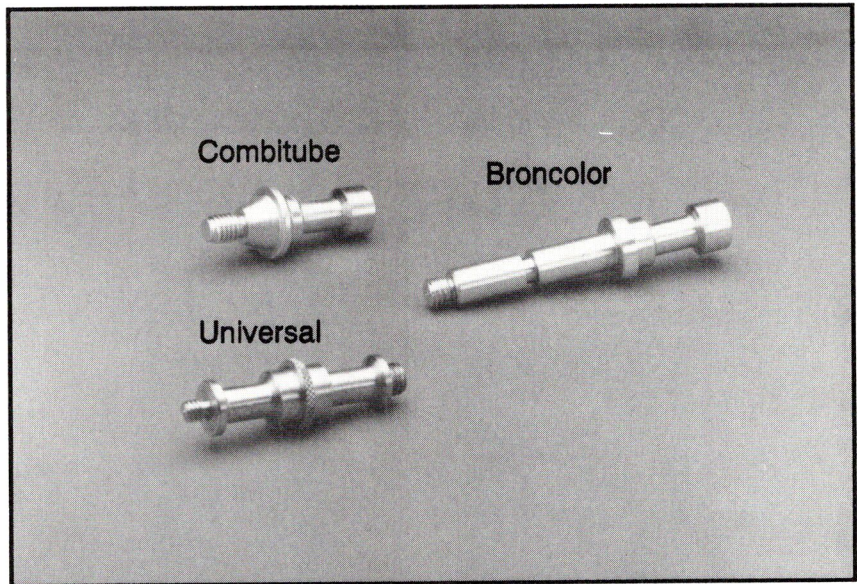
Hazy Adapter to Pantograph
13-3015 .... **$170.00**

Combitube Adapter
32-0673 .... **$26.00**

Universal Adapter
32-0678 .... **$16.00**
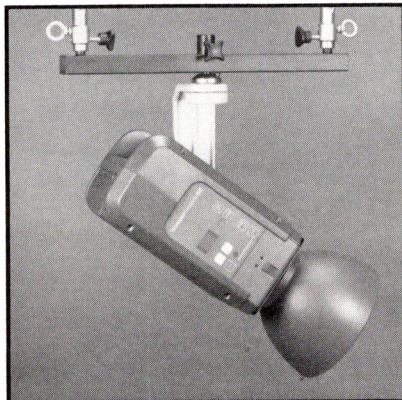
Multiple Scissors Bracket
Bracket for multiple mounting of scissors or extensions for lamps heavier than 48.5 lbs.
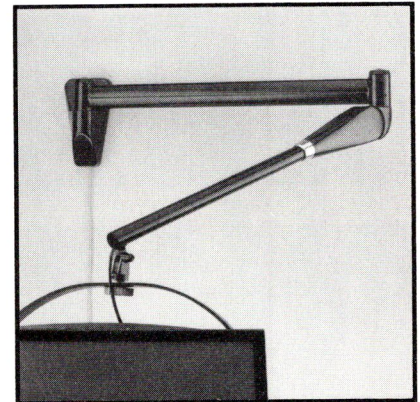32-0675 .... **$61.00**
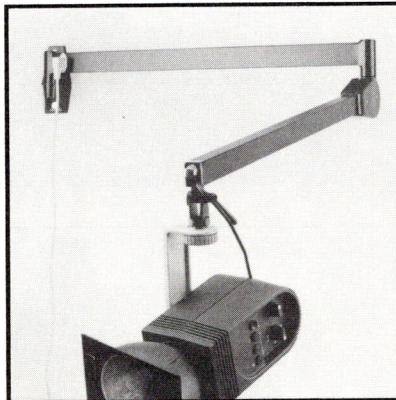
Lightweight Swivel Arm
Attach lampheads to walls with three-dimensional mobility. Comes with wall bracket for lamps up to 15 lbs.
32-0705 .... **$495.00**

Heavy Duty Swivel Arm
Comes with wall bracket. Will hold up to 33 lbs. Includes adjustment tool.
32-0706 .... **$631.00**

Trolly for Swivel Arms
Holds up to three light weight swivel arms onto the roof track rails.
32-0633 .... **$495.00**

FOBA
Roof Track
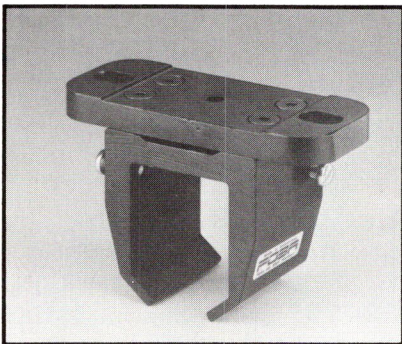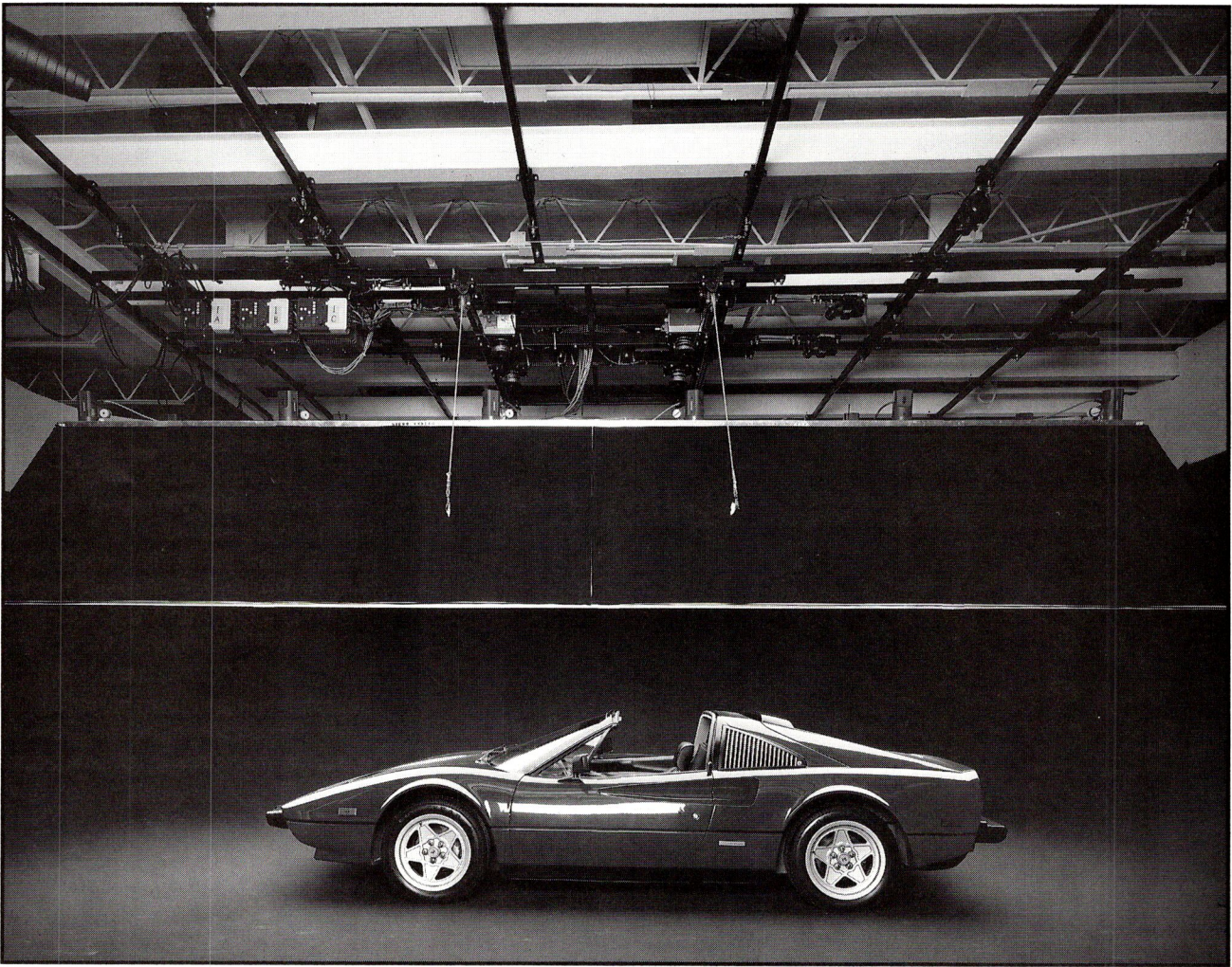
Ceiling Mounts
Attaches steel ceiling rail to roof supports.
31-0816 .... **$45.00**

Steel Ceiling Rail
Price per foot.
31-0812 .... **$17.00**
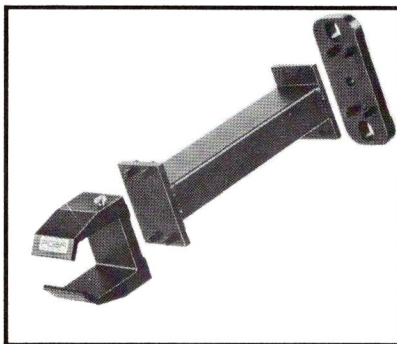
Extension Bracket
Custom made to lower ceiling rail system 4"-20".
31-0823 .... **$54.00**

Extension Bracket
To lower ceiling mounts 20"-40".
31-0824 .... **$65.00**
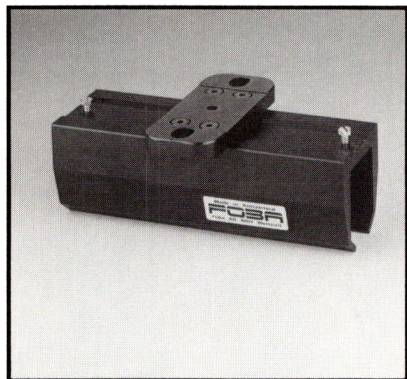
Connection Bracket
Connects two pieces of rail.
31-0815 .... $81.00

Endbuffer
To stop carriages at end of rail.
31-0814 .... $27.00

Tractor Carriage with Motor
To motorize length and cross movements.
31-0852 .... $1495.00

Prices and specifications subject to change without notice.

Power Cable Guide Roller
31-0855 .... $12.00

Wire Cable
Per foot.
31-0850 .... $2.50

Power Cable Guide only
31-0860 .... $69.00
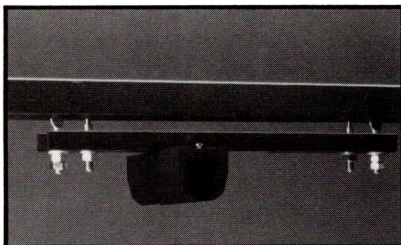
Single Cross Trolly
Dolly to make single moveable crossrail. Two are required to make one carriage.
31-0817 .... $235.00

Single trolly as above but with large bracket for added support.
31-0826 .... $258.00

Double Trolly
Used for a double crossrail. Minimum of 2 required.
31-0825 .... $439.00

1/4" Cable Holder
31-0865 .... $5.00

1/2" Cable Holder
31-0862 .... $5.00

3/4" Cable Holder
31-0866 .... $6.00
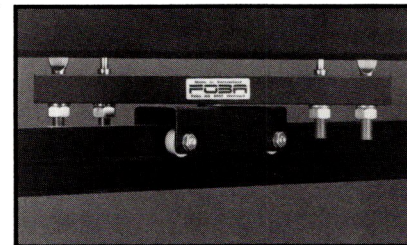
Connection Trolly
To hang roof-track on traditional rail systems.
32-0631 .... $227.00

FOBA
Mega Rail System

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Mega Rail Systems
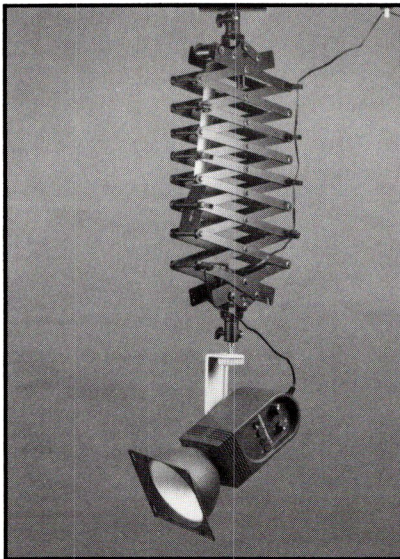
Scissors
Extendable from 12"-86". Includes Spring A for maximum load of 8.8 lbs. Additonal springs may be added for lamps up to 48.5 lbs. Requires trolly (31-0829).
32-0651 .... **$295.00**

Spring A
32-0648 .... **$35.00**
Spring B
32-0649 .... **$73.00**

Spring Combinations
1 A	8.8 lbs
2 A	17.6 lbs
1 B	24.25 lbs
1 A & 1 B	33 lbs
2 B	48.5 lbs

Trolly for Scissors Extension
31-0829 .... **$162.00**
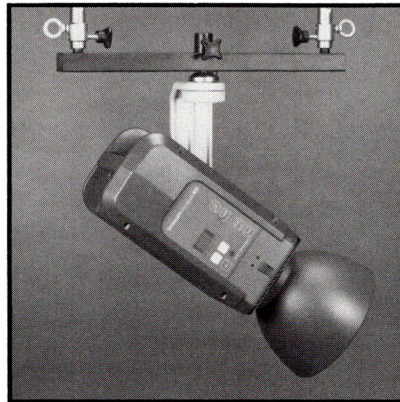
Multiple Scissors Bracket
Connection plate to hang heavy lamps on two scissors.
32-0675 .... **$61.00**

Extension Tube
Extends scissors down 19 3/4" from the bottom of the scissors trolly.
31-8001 .... **$36.00**

Extension Tube
Same as above but with an extension of 39 1/2".
31-8002 .... **$45.00**
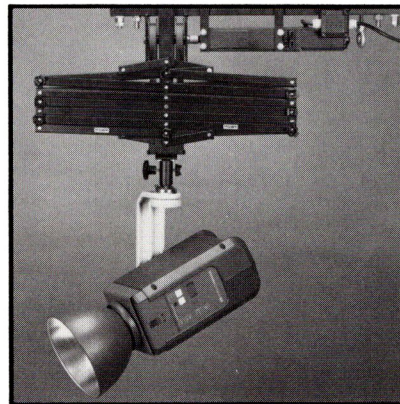
Motorized Scissors
31-0820 .... **$2645.00**

Trolly for Scissors Extension
31-0829 .... **$162.00**

Servor 3 Remote Control
For Pulso "A," Pulso and Servor receiver. Allows individual control of Broncolor power packs, along with control of the motorized functions of the Foba rail system.
16-3020 .... **$1180.00**
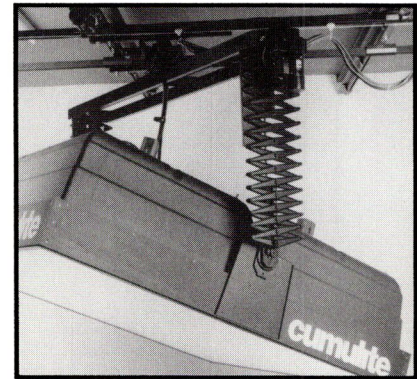
Motorized Pantograph to Twin Cumulite with Trolly
For mounting twin Cumulite to the Foba ceiling rail system with motorization of all movements.
13-4025 .... **$11500.00**

Connection Trolly for Twin Cumulite
Minimum 2 required for motorized telescope.
13-4020 .... **$450.00**

Motor for Rotating Cumulite
Complete, for motorized trolly.
13-4031 .... **$4100.00**

Junction Box
One required for each rail system.
13-4032 .... **$210.00**

Receiver to Control Motor (Cumulite)
16-3008 .... **$1080.00**

Receiver to Switch On/Off Electrical Loads
Controls three functions, max. 2 amps per function. Higher loads require relay.
16-3009 .... **$1060.00**

Trolly Complete for one Pulso Pack 2,4,8.
13-4033 .... **$625.00**

Trolly Complete for two Pulso Packs 2,4,8.
13-4034 .... **$800.00**

Cumulite Motorized Suspension with Trolly & Cable 🚛

For mounting the single Cumulite on the Foba ceiling rails, operated by cable control.

13-4026 .... **$7150.00**
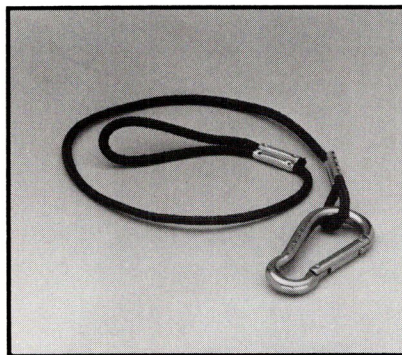
Motorized Suspension with Trolly for Remote 🚛

For mounting the single Cumulite on the Foba ceiling rails, operated by Servor Receiver. Includes Servor Receiver, requires transmitter.
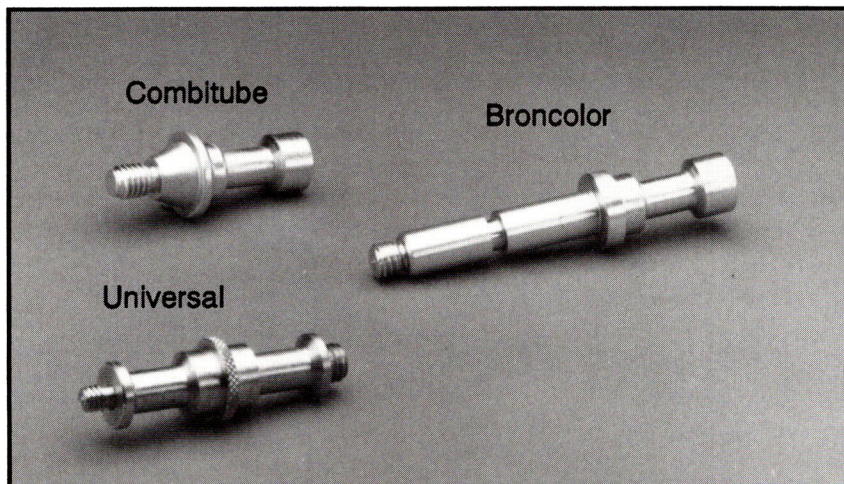
13-4027 .... **$8225.00**

Hand Crank

For locking pulley carrier

31-0811 .... **$61.00**

Safety Cable for Lamps

31-0840 .... **$22.00**

Combitube

Broncolor

Universal

Universal Adapter
32-0678 .... **$16.00**

Broncolor Adapter
32-0671 .... **$23.00**

Combitube Adapter to Scissors
32-0673 .... **$28.00**
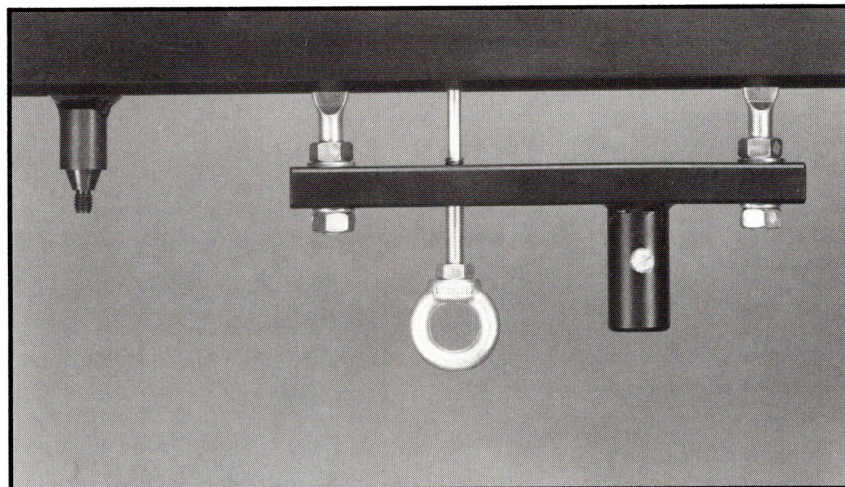
Twin Roller with Combitube Bottom
31-0804 .... **$91.00**

Trolly for Adapters
31-0827 .... **$175.00**

FOBA
Mega Rail System

Just Portable Viewers
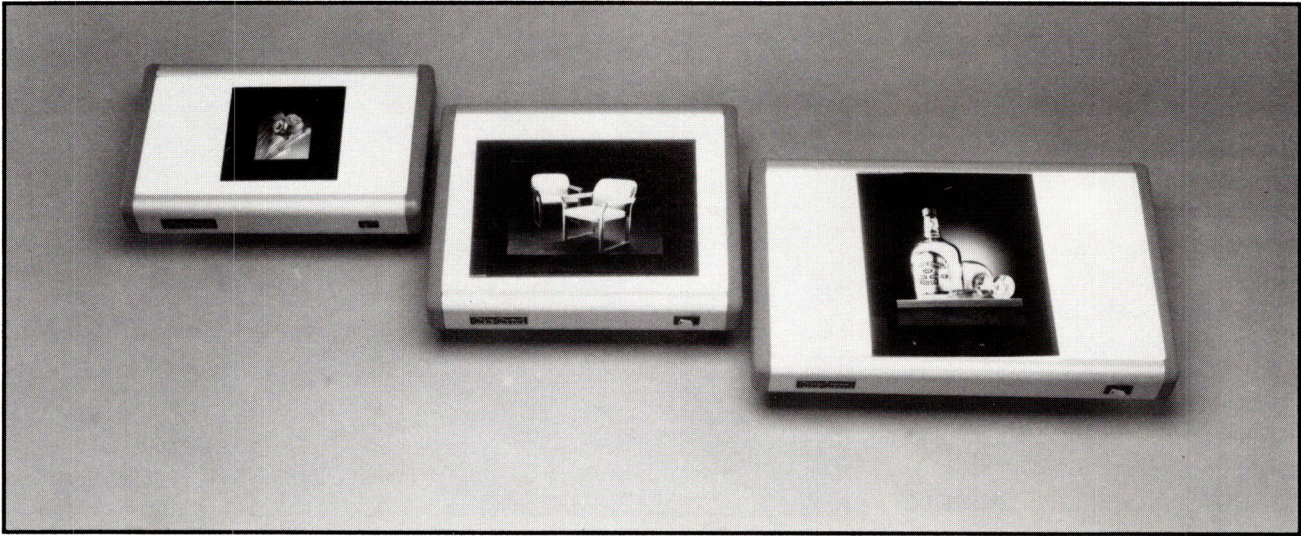
11x17 Flat Viewer 1
60-1001 5066 .... $256.00

8x17 Bracketed Viewer 1B
60-1006 9209 .... $348.00

14x23 Flat Viewer 3
60-1003 14241 .... $348.00

10x23 Flat Viewer 1A
60-1005 19752 .... $278.00

12x17 Bracketed Viewer 2B
60-1007 3558 .... $438.00

14x48 Flat Viewer 4
60-1004 14274 .... $590.00

14x17 Flat Viewer 2
60-1002 5074 .... $316.00

12x23 Bracketed Viewer 3B
60-1008 3665 .... $592.00
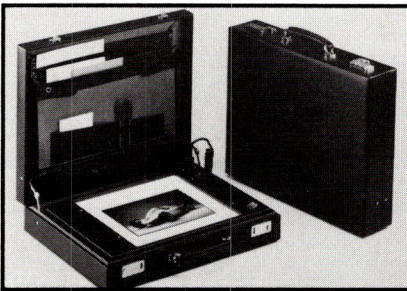
12x12 Flat Viewer In Case
Outer dimensions 20x16x4
61-1030 505 .... $920.00
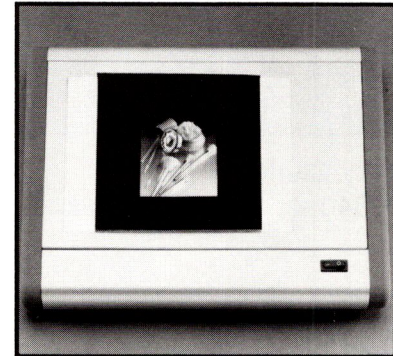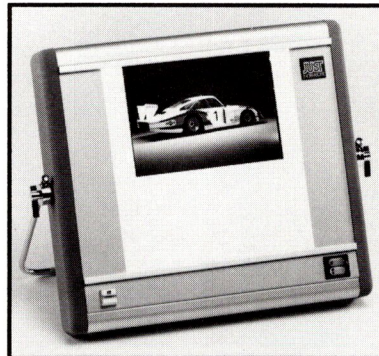
Color Control Professional
Flat and Swiveled Viewers

Viewer	Outside Dim.	Manuf. #	Cat. #	Price
5x8 Mini-1 Flat	9x13x12	11270	61-1000	$278.00
5x8 Mini-1 Swivel	9x13x12	1636	61-1020	$418.00
8x10 Mini-2 Flat	17x13x12	4382	61-1001	$420.00
12x13 Flat #2	17x19x3	16196	61-1002	$386.00
14x17 Flat #3	17x25x3	16519	61-1003	$418.00
Bracketed Viewers				
8x12 #1	13x19x3	10165	61-1011	$416.00
12x12 #2B	17x19x3	19109	61-1012	$520.00
13x17 #3B	17x25x3	9084	61-1013	$720.00

27x46" Work Station 5/1
• Graphic System Light Table Top 5
• Transparency Viewer 2
• Copy Holder 1
61-5041 3319 .... **$3740.00**

28x58" Work Station 6/1
• Graphic System Light Table Top 6
• Transparency Viewer 2
• Copy Holder 1
61-5031 11338 .... **$4373.00**

28x58" Work Station 6/2
• Graphic System Light Table Top 6
• Transparency Viewer 2
• Copy Holder 2
61-5111 3327 .... **$4480.00**

Graphic System Light Table Tops

27 x 46", #5 🚚
Uses Base Unit (61-5220, $360.00)
61-5258 8615 .... **$1690.00**

27 x 58", #6 🚚
Uses Base Unit (61-5222, $380.00)
61-5260 8631 .... **$2030.00**

31 x 46", #7 🚚
Uses Base Unit (61-5220, $360.00)
61-5262 8656 .... **$2140.00**

31 x 58", #8 🚚
Uses Base Unit (61-5222, $380.00)
61-5264 8680 .... **$2490.00**
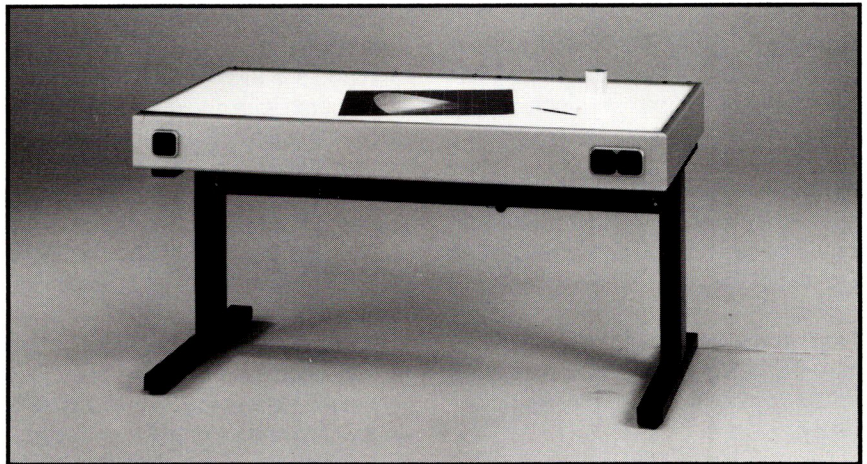
18x24 Copy Holder, Combi Size 1
For color-correct viewing of reflective art such as prints and color proofs. Use
with Graphic System Light Table Tops, above.
61-6011 5173 .... **$1690.00**
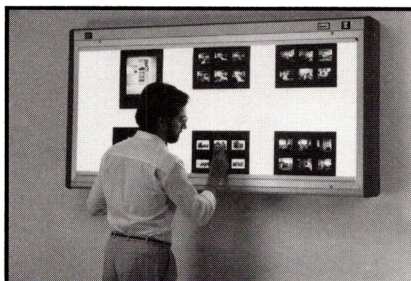
Wall Units

Type	Outer Dim.	Cat. #	Manuf. #	Price	
24x45", #3	32x50x6	61-2000	19166	$1720.00	🚚
24x56", #4	32x62x6	61-2002	19190	$2020.00	🚚
32x56", #5	39x62x6	61-2003	7021	$2480.00	🚚

JUST NORWICH
Transparency Viewers
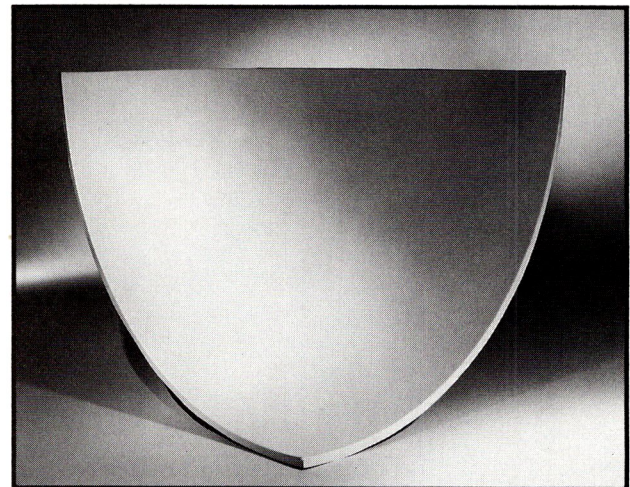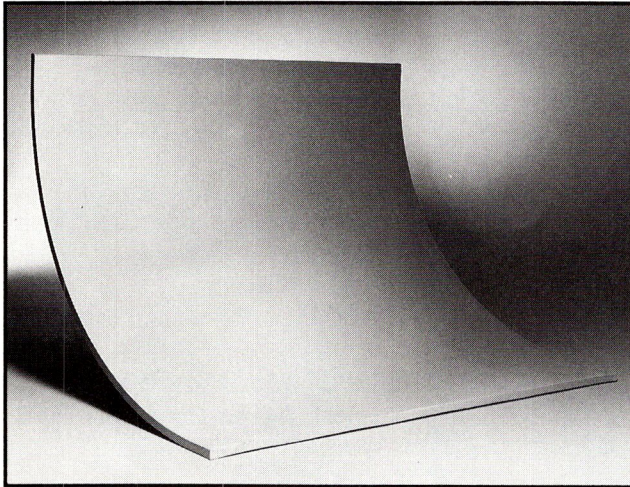
Pro-Cyc

Specifications

Radius: Pro Cyc has a radius of 5 feet, making it easier to light than walls with a 3 foot radius.

Modular Design: The entire system can be assembled by using just a few different types of pieces - floor, ceiling and corner sections.

Patented Tapered Design: All edges are slightly tapered so that taped and spackled seams are the same level as the rest of the wall.

Fast Installation: Because of its modular design, installation time is 50 to 75% less than a typical dry wall/plaster cyc.

Movable: All sections can be easily removed and reinstalled in a new studio.

Durability: Sections are made of highly durable fiberglass. The fiberglass will not be damaged by high heels, standing, or even jumping on it!

Call for a complete quotation on Pro-Cyc for your studio.

Installation

Installing Pro-Cyc is a fairly straight-forward process. In fact, if you've ever installed drywall over rough framing, you can install Pro-cyc.

When installing a straight section, the module is aligned with the framing and secured with drywall screws. This process is repeated until an entire section is installed.

When you come to a corner module, one edge is attached to a vertical cove section and the remaining two edges become starting points for straight sections of cove modules.

Bottom edges are fastened to the floor with concrete nails and the space between floor and the lip of the cove is filled with compound and then taped.

Installation is not a difficult job and you'll find that your studio is only out of commission for only a few days instead of a few weeks with the old system.

Pricing

5' Radius Straight Section
up to 4 feet
70-1001 .... $690.00

5' Radius Straight Section
over 4 feet to 8 feet
70-1002 .... $990.00

5' x 5' Radius Corner Section
70-1003 .... $1090.00

Prices and Specifications are subject to change without notice.

Pro-Cyc is a special order item. Please see pg. 108 for conditions.

All Pro-Cyc orders are shipped by truck. Call for shipping charges.

Financing

New and Expanded Up to 60 months Financing Available

See page 109 for Details

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Pro-Cyc

Pro Cyc's modular design makes installation as simple as possible. Just frame out a wall with 2x4's (built onto your existing wall) starting five feet from the ground. The new wall will become the flat surface of the cyclorama; the five-foot cove sections fit under it, flush with the surface and bolted to each other and the wall.

FIGURE D. FLOOR

5'-0"

SHEETROCK
STRAIGHT COVE PIECE
DRYWALL TAPE AND MUD
1 5/8" DRYWALL SCREWS @ 10" oc
FRAMING
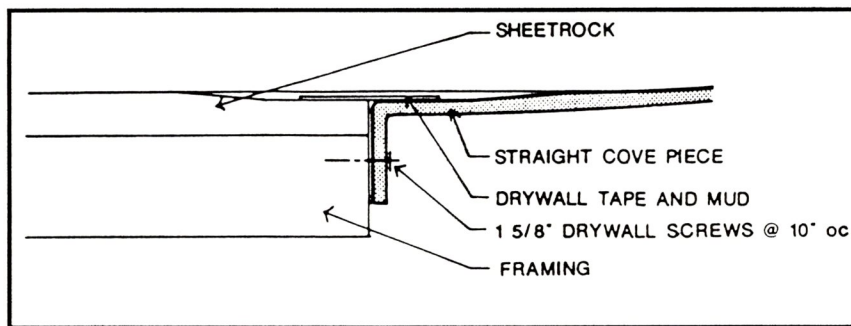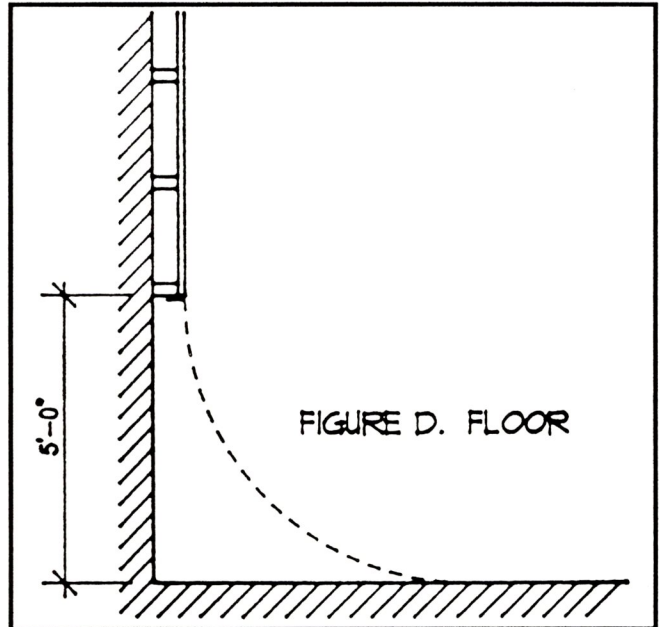
Special indented ends on the cove pieces allow them to be filled with joint compound and taped over to create a smooth joint between cove sections and between the cove and the wall.

The tapered ends of floor cove sections make it easy to create a smooth, seamless joint between the cove and the floor.

5 1/2"   3/4"
FILLER – TAPER 1/4" TO 0"
CONCRETE FLOOR
REINFORCED EDGE OF STRAIGHT COVE PIECE
1 1/2" CONCRETE NAIL @ 10" oc (COUNTERSINK HEAD)
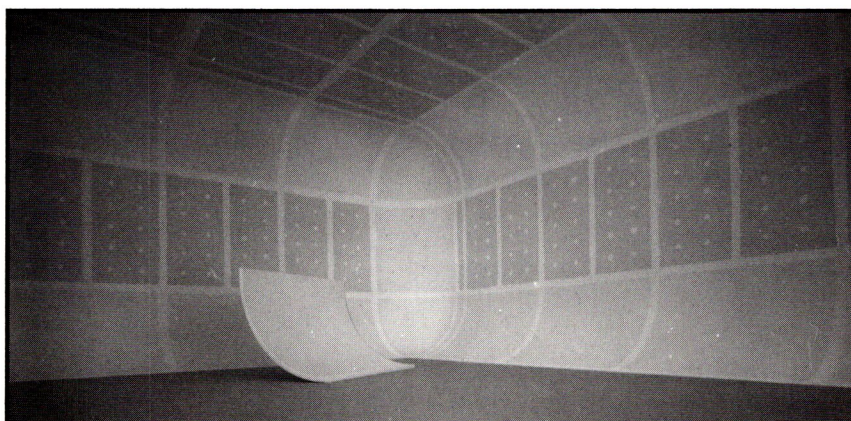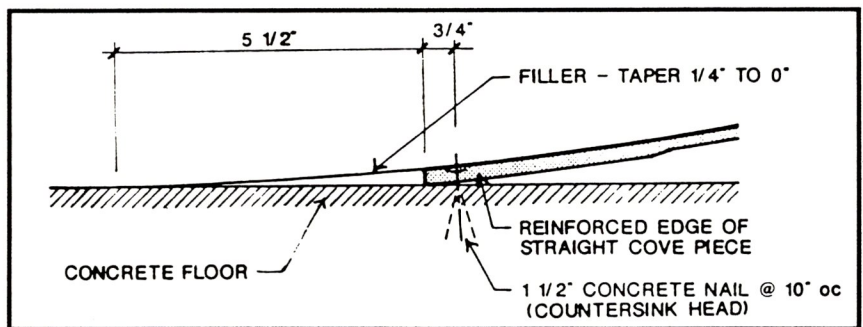
Pro-Cyc's modular design and ease of installation mean that you'll be back in business in no time. Its strength and durability mean that it will last through years of heavy use.

PRO-CYC

Photo Know How
The Art of Large Format

This course goes to the root of problems by systematically working through the theory and practice of view camera movements. With the aid of numerous practical exercises the course will also familiarize you with the basic rules which are important to the correct application of camera movements.

Photo Know How begins with a basic discussion of the components of a view camera. You will then learn the different methods of light metering, mainly involving film plane spot measurement.

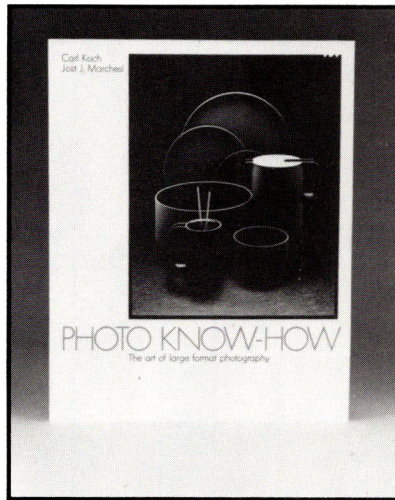The lessons progress through perspective control, optical principles and sharpness distribution. Numerous methods for solving most large format problems are discussed to make sure you'll understand the full extent of view camera capabilities.

After you've gained an understanding of what is possible with the Sinar system, Photo Know How leaves you with sixteen assignments of varying difficulty to allow you to put your newfound knowledge into practice.
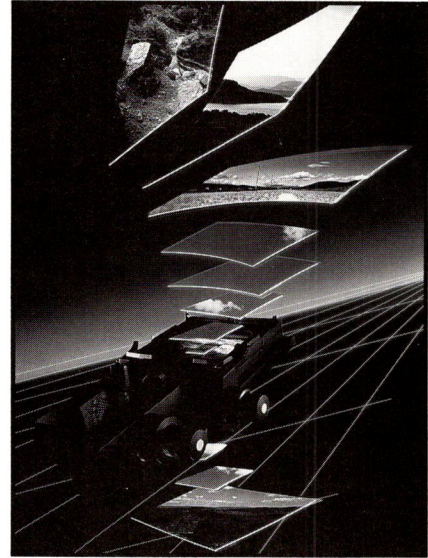
Both authors are experienced professional photographers. Carl Koch is the designer of the world-famous SINAR view camera system; Jost J. Marchesi, who has also written other photographic handbooks, is a lecturer in photography at the Zurich School of Arts and Crafts.

Soft Bound, 232 pages.

41-1050 .... **$29.00**

The Large Format: Handbook on the SINAR

This view camera handbook presents the logical structure of an immensely versatile and wide-ranging camera system based on SINAR products. An appreciation of this structure is vital if we want to simplify routine operation with the professional photographer's fundamental tool - the camera.

The Handbook guides you step by step through the extensive Sinar system. You'll gain an appreciation of the ingenious Sinar system philosophy, conceived with convenience and efficiency in mind.

Through detailed descriptions of system components, you will learn the full extent of the capabilities of the Sinar system - from behind-the-lens shutters to system interchangeability to advanced masking techniques.

This is a valuable guide to many of the little-known gems of the Sinar system.

Soft Bound 141 pages.

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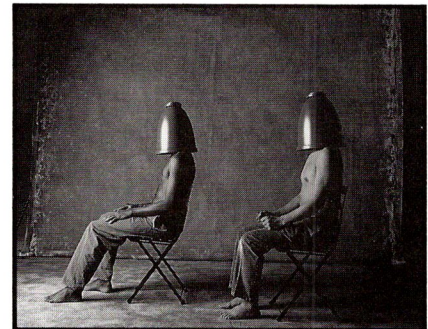
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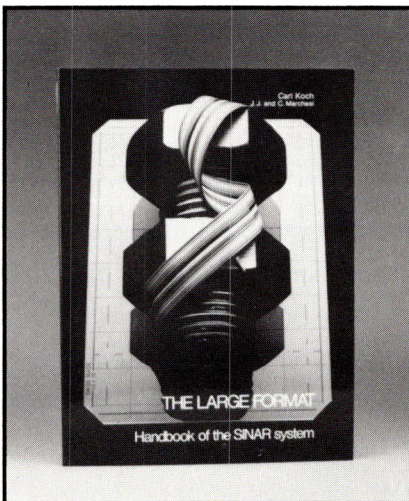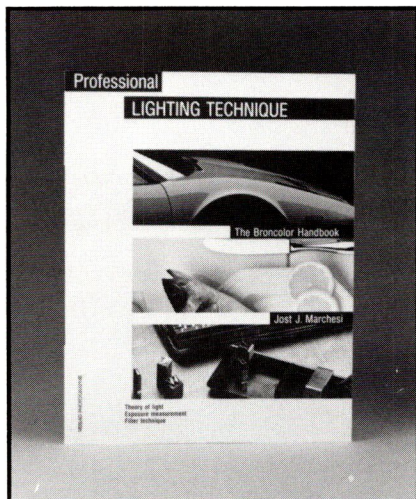
Professional Lighting Technique

This well-illustrated book covers a wide range of topics useful to the established as well as the beginning photographer. Subjects covered include the theory of light, filter technique, exposure measurement, lighting for specific subjects and much more.

Soft bound 211 pages.

41-1075 .... **$29.00**

Ultimate Commercial Photographer's Handbook Volume II

Finelight's "Ultimate Commercial Photographer's Handbook II" spotlights the talents of 6 successful professionals. The handbook, conceived by the highly respected photographer and lecturer Dean Collins, showcases innovative techniques and aims at informing and inspiring photographers working in a wide range of specialties.

Each photographer's work is illustrated and explained in a separate 6-page section featuring high-quality full page color reproductions, charts and diagrams. In addition to the photographic how-to information, writer Tony L. Corbell has included insightful details on the photographers' professional philosophies and business strategies.

3 Ring Binder, 72 pages

41-1070 .... **$39.95**
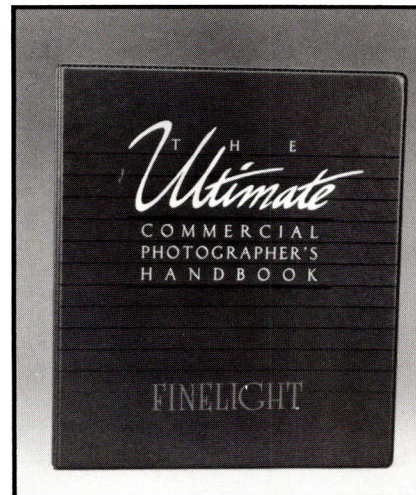
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✂ -

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Questions First, Shoot Later

The professional photographer is continually learning, whether by attending workshops or by absorbing experience on the job. The problem with "on the job" training, though, is that it's painfully slow.

Sinar Bron's 4 1/2-day workshop is designed to overcome this problem by building a thorough understanding of both the principles of photography and the practical day-to-day techniques of using sophisticated large format equipment.

The workshop is limited to only twelve participants and conducted by experts in their fields. Classroom segments include optical theory, how to apply movements to control depth-of-field, exposure control, film plane metering, shooting for reproduction, contrast, different lenses and their applications. Large format camera tilts and swings, converging vertical perspective, the Scheimpflug rule and implementing two-way sharpness distribution control are also covered in classroom discussions.

Working Together in Three Part Harmony

After the classroom portion of the course, the workshop is separated into three-person teams, each of which is assigned a complete setup, to work on a number of assignments similar to those that would be received from an advertising agency. Later, these shots are compared to previously executed photography, reviewed and critiqued.
One of the elements of the review is the presentation of SINAR solutions to the previous assignments.

For their successful completion, these assignments require asymmetrical swings along the vertical axis, which influences the perspective, and combined swings and tilts. They quickly provide a comfortable familiarity with handling the view camera and sophisticated accessories such as the SINAR Digital Shutter and film plane meters.
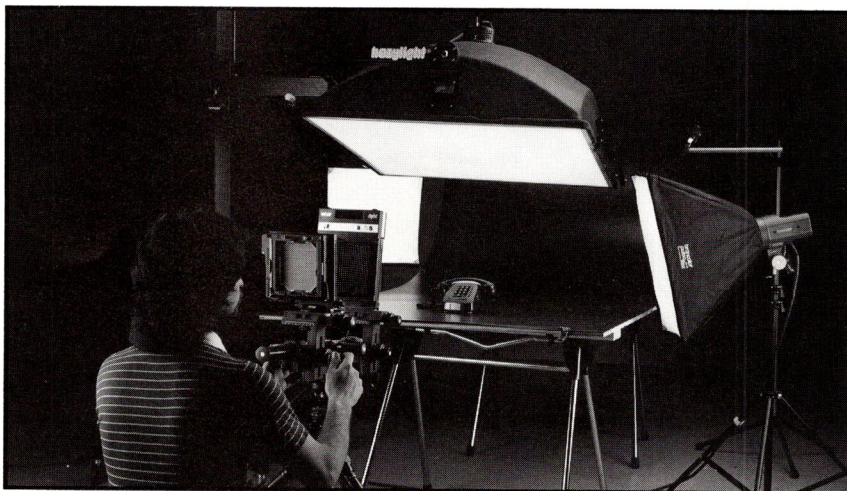
See the World in a Whole New Light

There's only one right way to operate a camera but lighting is in the eye of the beholder. A guest speaker, a well known commercial photographer, discusses lighting and light techniques using his portfolio as the basis. He outlines the light management problems encountered in his work, touching briefly on such subjects as lighting control, contrast control, metering, film plane metering, multiple exposures and brightness range.

Throughout the course you'll be working with the latest in lighting equipment-bank lights, spots, soft box, strip lights, Hazylights and mixed lighting.

In short, the SINAR workshop pulls together the many elements of good photography into an easily understood package that results not only in theoretical and practical knowledge, but in outstanding work.

Course Fees and Schedule

The Professional View Camera Workshop is held five times a year in Edison NJ. Course fee is $550.00, which includes all materials. Course fee with lodging is $980.00.

Upcoming View Camera Workshops for 1991
Jan 21-25
April 15-19
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New Lighting Workshop
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We have made every effort to assure the accuracy of all information in this catalog. However, we reserve the right to correct any errors, whether in pricing, description, specification, etc. All prices and specificatons are subject to change without notice. Some prices may be subject to quantities on hand and availability.

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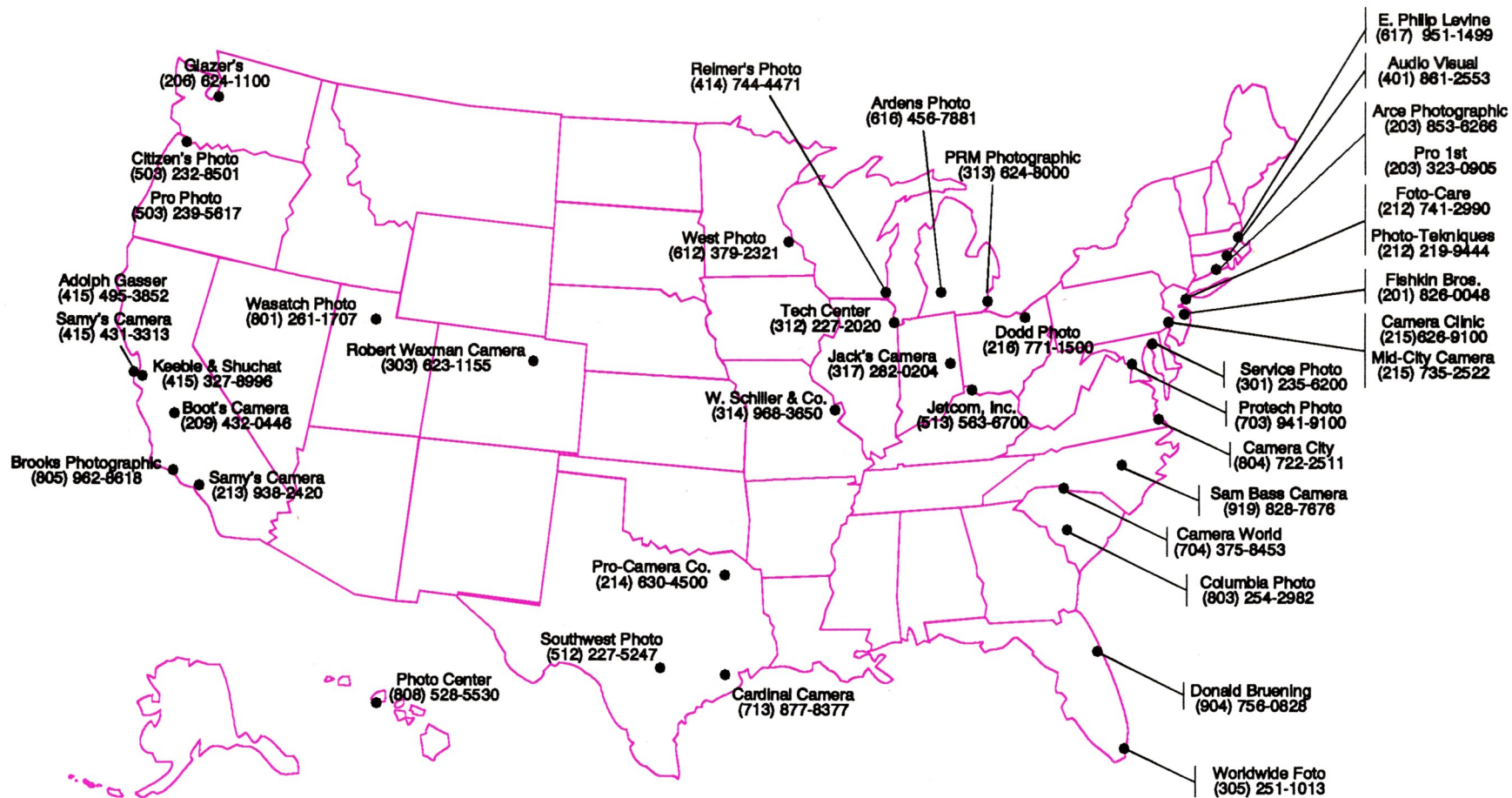Alexandria, VA
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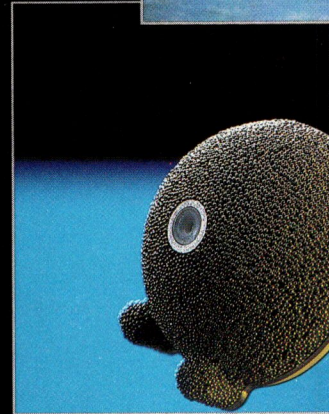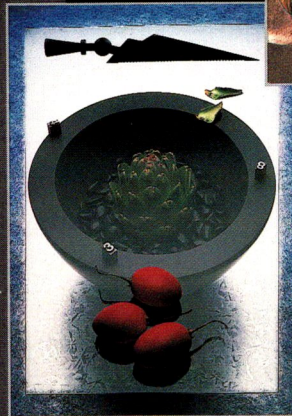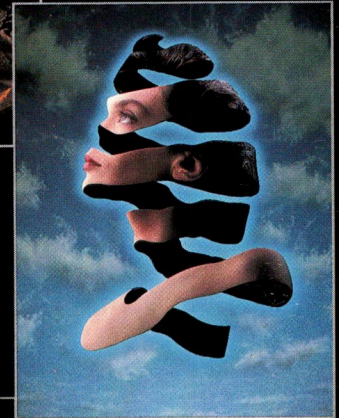**Power Strobe Repair**
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