



Kapture Group Inc.

Manufacturer of precision trigger control systems for high-speed photographic and photonic applications



HIGH-SPEED VIDEO & FILM

System (1606-3-STV) includes:
MD1606ST Laser System
MD1505 Sound Trigger
Foot-switch
Fitted hard case
4 multi-colored cables

KEY FEATURES INCLUDE

Compatible with digital camera backs.

Laser Trigger with 2 second lockout.

Precision delay with PC sync, motor-drive and system outputs.

Sound Trigger with adjustable sensitivity and 2 second lockout.

Electronic Cable Release designed to release any camera shutter.

Standardized cables available in 8 colors.

Sequential triggering of multiple imaging systems with synchronous & asynchronous negative or positive TTL output.



HIGH-SPEED VIDEO & FILM

System (1606-4-STV) includes:
MD1606ST Laser System
MD1707 Universal Delay
MD1505 Sound Trigger
Foot-switch
Fitted hard case
4 multi-colored cables



HIGH-SPEED STILL APPLICATIONS

System (1606-1-S) includes:
MD1606 Laser System
MD1202 Electronic Cable Release
MD1505 Sound Trigger
MD1707 Universal Delay
Slave Strobe
Fitted hard case
8 multi-colored system cables
Motor drive adapter cables

TYPICAL PROPAGATION

MD1202 — 11 ms

MD1505 — 200 μ s

MD1606 — .5 μ s

MD1606ST — .5 μ s

1707 Universal Delay
non-delayed output — 4-10 μ s

delay range #1 — 15 - 4500 μ s

delay range #2 — 4 - 1200 ms

MD1808 TTL Interface — 1 μ s

Slave Strobe — 1.5 μ s



HIGH-SPEED STILL, FILM & VIDEO

System (1606-2-ST) includes:
MD1606ST Laser System
MD1202 Electronic Cable Release
MD1505 Sound Trigger
MD1707 Universal Delay
Slave Strobe
Fitted hard case
8 multi-colored cables

LASER SPECIFICATIONS

class IIIa / 5mw

650 nm wavelength

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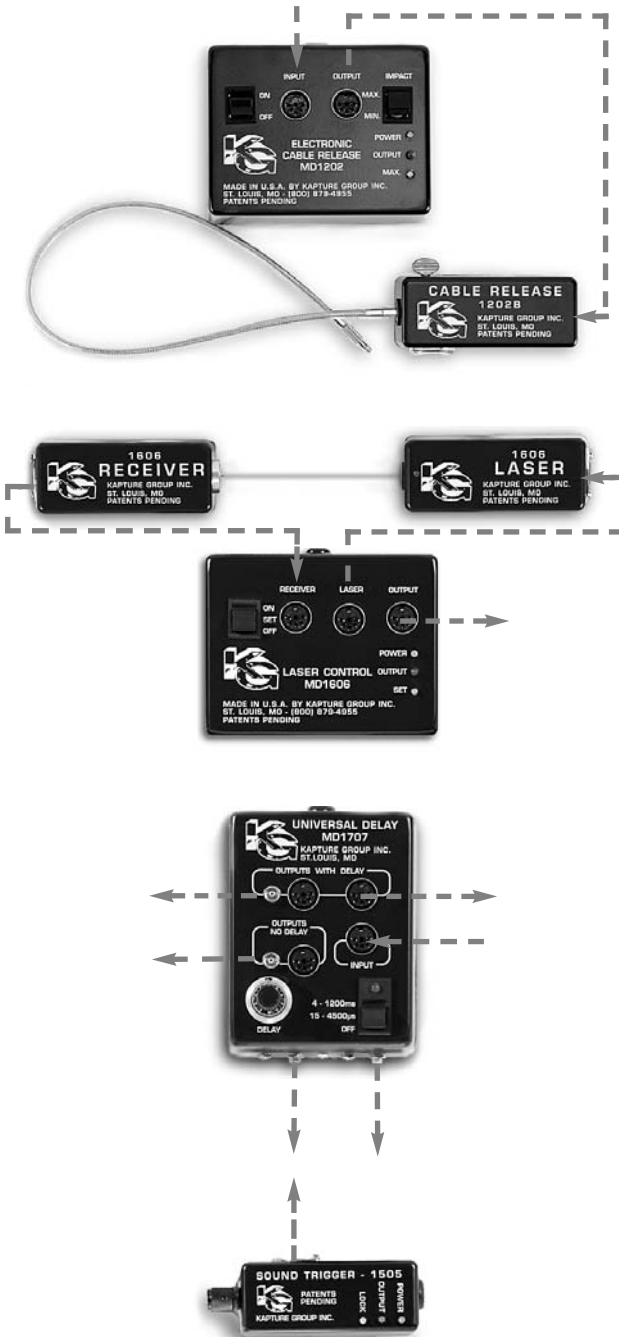
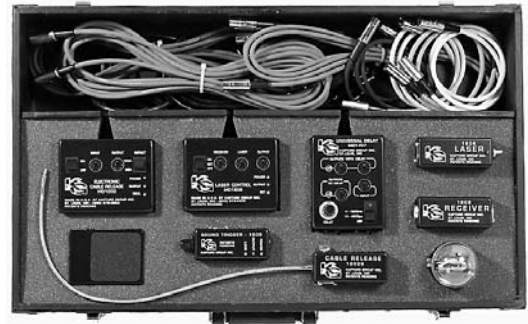
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Kapture Group Trigger Control Systems High-Speed Photography Simplified

KAPTURE GROUP INC. manufactures a broad range of trigger control components designed to simplify high-speed photography. We have assembled a select group of components to create the "TOOLBOX TRIGGER CONTROL SYSTEM". Our system approach allows you to create a custom configuration for the task at hand.



The Electronic Cable Release MD1202 is designed for remote cable release operation via Laser Trigger, Sound Trigger or foot-switch and may be used on any camera or shutter. Shots once demanding open flash techniques can now be done in any lighting condition. The Electronic Cable Release facilitates many techniques that would normally require a second set of hands such as light painting by using the Sound Trigger to open and close the shutter remotely.

The Laser Trigger MD1606 is designed for high-speed beam triggering applications. Setup is easy and laser alignment is verified with an LED located on the receiver. After the beam is broken it automatically turns off for two seconds and will not be in the shot.



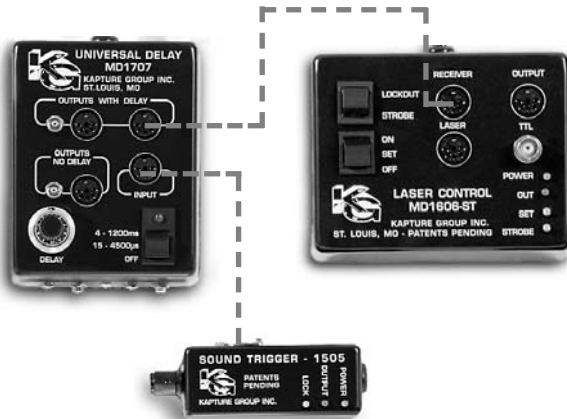
The Universal Delay MD1707C is a precision delay module allowing the precise placement of fast moving subjects. Two delay ranges are provided, each with 1000 selectable increments of delay. There are two 5 pin delayed outputs and one non-delayed 5 pin output. PC sync delayed and non-delayed outputs are provided for open flash applications.

The Sound Trigger MD1505 is designed to connect to the Universal Delay module or directly to the Electronic Cable Release. The microphone is directional and the sensitivity is adjustable. The Sound Trigger also has a two second lockout which automatically resets after triggering.

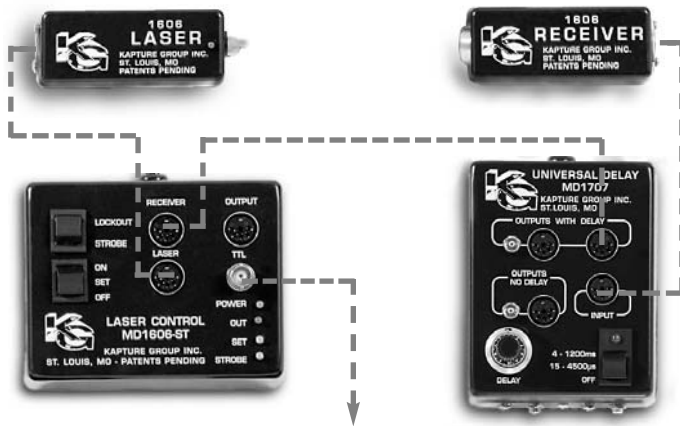


Kapture Group Inc.

Manufacturer of precision trigger control systems for high-speed photographic and photonic applications



The above setup uses the 1505 Sound Trigger & the 1707 Delay unit to create a delayed TTL pulse.



This setup produces a delayed TTL pulse each time the laser beam is broken.

Trigger any imaging system or camera by custom configuring components to your application

Sequential triggering of multiple imaging systems

Synchronous & asynchronous negative or positive TTL output

Laser Trigger with 2 second lockout in the asynchronous mode

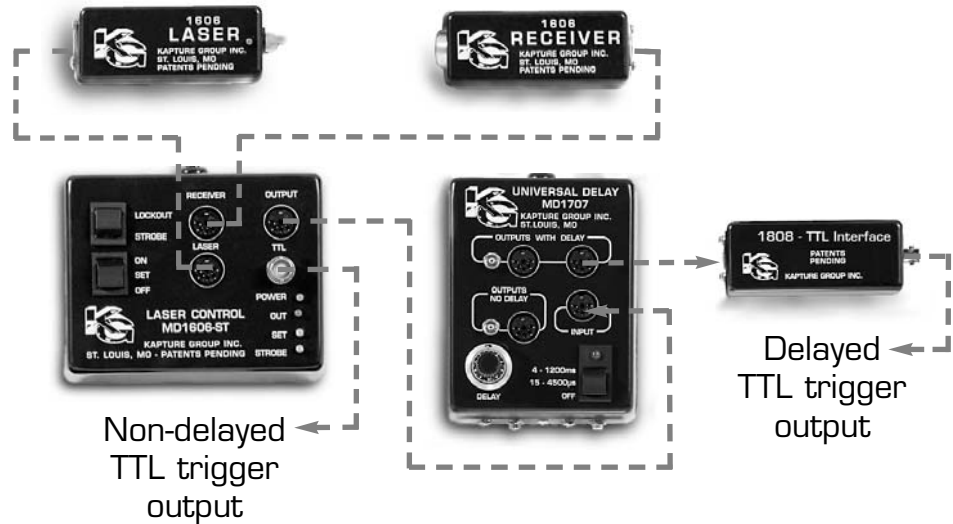
Precision delay with PC sync, motor-drive and system outputs

Sound Trigger with adjustable sensitivity and 2 second lockout

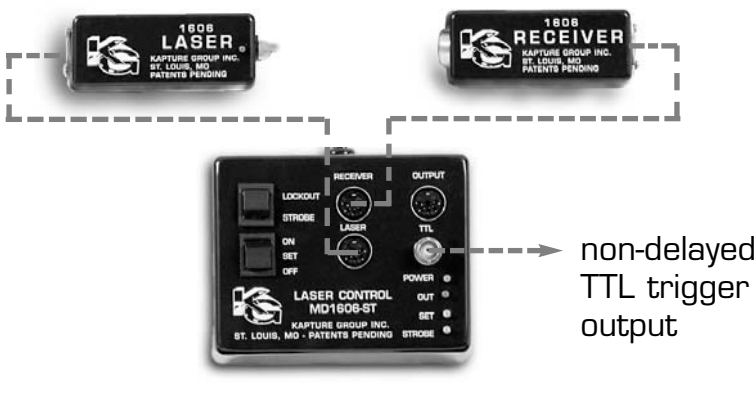
Electronic Cable Release designed to release the shutter of any format camera - Compatible with digital camera backs

Standardized system cables available in 8 colors and various lengths

The setup to the right creates both a delayed and non-delayed TTL pulse when the laser beam is broken. The first TTL pulse is created by the 1606ST Laser Control as soon as the laser beam is tripped. The second TTL pulse is controlled by the 1707 Delay unit. The 1808 TTL interface produces the second TTL pulse based on the delay selected.



This setup produces a non-delayed TTL pulse when the laser beam is broken



The Electronic Cable Release MD1202 is designed to allow remote cable release operation via Sound Trigger, Laser Trigger or Foot-switch. Various special effects can be achieved such as tail flash sync when used in conjunction with the Universal Delay MD1707.



This setup uses the 1505 Sound Trigger to produce a non-delayed TTL pulse



Clients Include

- Aberdene Proving Grounds
- Allied Signal Aerospace
- Brookhaven National Lab
- Calaway Golf
- Cobra Golf
- Chrysler Corporation
- Elgin Air Force Base
- Lockeed Martin
- NASA Lewis Research
- Tufts University School of Medicine
- University of Chicago



CAMERA

35mm camera

150mm lens attached to a bellows

SETUP

I placed a medium sized soft light with a blue gel attached behind a large black darkroom tray filled with water. Two small soft-lights were placed to the sides for fill. A laser trigger was aligned over the top of the water with a turkey baster mounted on a crossbar over the tray to assure the drips would break the beam. A delay module was used to delay the trigger

signal long enough for the water drop to form before an electronic cable release tripped the shutter. Perfect water drops require perfectly calm water.



CAMERA

4X5 field camera
150mm lens

SETUP

This shot of an axe slicing through a light bulb is actually a light bulb being thrown at an axe mounted to a support. The axe blade was pointing upward and the bulbs were thrown down at the blade. The viewing orientation was reversed for the illusion. Three small strobes were used for this open flash shot. The first strobe was connected to the delayed PC output of the delay module with the other 2 slaved off the first. A laser

trigger was used with the beam set about an inch above the blade. A sound trigger would have worked equally well for this shot.



CAMERA

35mm camera

50mm macro lens

SETUP

This shot of the lemons and limes with cavitating air was shot using a 35 gallon aquarium with a laser trigger shooting through the glass, water and more glass. The alignment is easy because you can easily find the beam and simply place the laser receiver in its path after its passed through the tank. You never need

to worry about the beam showing up in the shot because as soon as the beam is broken it turns off for 2 seconds. The lemons were thrown very hard into the tank to create the cavitation effect. A delay module was used to position the fruit at the prefocused point within the tank before triggering an electronic cable release.



CAMERA

4X5 field camera

150mm lens

SETUP

A silver spoon was mounted to a magic arm and filled with milk. The blue backdrop is only 10 inches under the spoon. Two medium sized soft-lights were placed to the left and right sides of the spoon forming almost a tent lighting effect.

Most of my backgrounds are placed in very close to the set so that additional high-speed flash units are not required to light the backdrops. A laser trigger was aligned over the top of the spoon and a delay module was used to delay the trigger signal long enough for the splash to reach its peak before an electronic cable release tripped the shutter.



CAMERA

Medium format camera
120mm macro lens

SETUP

Two medium sized soft-lights were placed to the left and right sides of the cup . Most of my backgrounds are placed in very close to the set so that additional high-speed flash units are not required to light the backdrops. A laser trigger was aligned over the top of the coffee cup

and a delay module was used to delay the trigger signal long enough for the instant coffee to begin to enter the cup before an electronic cable release tripped the shutter.



CAMERA

Medium format camera

120mm macro lens

SETUP

Two medium sized soft lights were placed to the left and right sides of the cup . Most of my backgrounds are placed in very close to the set so that additional high-speed flash units are not required to light the backdrops. A laser trigger was aligned over the top of the coffee cup and a delay module was

used to delay the trigger signal long enough for the instant coffee to begin to enter the cup before an electronic cable release tripped the shutter.



CAMERA

35mm camera

50mm macro lens

SETUP

This shot of a diving guage being dropped into the tray of water used 2 soft-lights and 2 small strobes to highlight the splash. A large black darkroom tray was used

to contain the water with the surface of the soft-light reflected in the water. A laser trigger. was used with the beam set about 3 inches above the surface of the water. One of the strobe was connected to the delayed PC output of the delay module and the other strobes were slaved. Delay was adjusted to capture the diving guage just entering the water and beginning to splash.



CAMERA

Medium format camera

80mm lens

short extension tube

SETUP

Two medium sized soft-lights were used.

The first was placed to the upper left and slightly to the rear and the second to the right and slightly forward. A large white fill reflector was added from just under the lens to just out of frame under the tail feathers. A laser trigger

was aligned across the set so when the dove was released from above and behind the black backdrop he (actually she) would break the beam. Birds naturally spread their wings when released from above. A delay module was used to delay the trigger signal long enough for the dove to begin to open its wings before an electronic cable release tripped the shutter. I liked the way the eye peeks at the camera between the open feathers.



CAMERA

Medium format camera

80mm lens

short extension tube

SETUP

Two medium sized soft lights were used. The first was placed to the upper left and slightly to the rear and the second to the right and slightly forward. A large white

fill reflector was added from just under the lens to just out of frame under the tail feathers. A laser trigger was aligned across the set so when the dove was released from above and behind the black backdrop he (actually she) would break the beam. Birds naturally spread their wings when released from above. A delay module was used to delay the trigger signal long enough for the dove to begin to open its wings before an electronic cable release tripped the shutter. I liked the way the eye peers at the camera between the open feathers.



CAMERA
4X5 field
camera
150mm lens

SETUP

This shot of an exploding alarm clock being struck point blank by a 12 gauge shotgun blast was shot at night in an old barn using open flash technique. Eight small strobes dialed

down to 1/16th power were placed behind plexiglass and suspended over the set. The first strobe was connected to the delayed PC output of the delay module with the others slaved off the first. A laser trigger was used with the beam set about an inch behind the clock. The clock was sitting on clear plexiglass with black seamless paper placed underneath. You can see the plastic case of the clock cracking and starting to come apart. While these strobes were capable of stopping the clock itself they were not fast enough to stop the shot pellets blasting through the face of the clock. Strobes are available to stop this kind of action but I personally can't afford them although they can be rented for about \$300 per head per week.



CAMERA

35mm camera

90mm macro lens

SETUP

For this high-speed triple exposure of 3 separate clear lit light bulbs I used the tricolor (RGB) filter technique.

A light bulb socket was firmly mounted to a table over a black backdrop with the camera mounted on a tripod and sandbagged to keep

everything in registration for all 3 exposures. A pellet gun was mounted to a V support with the tip of the barrel exactly 48 inches from the bulb for all 3 exposures. A sound trigger was placed close to the pellet gun to pick up the sound of the gun going off. The sound trigger was connected to the input of a delay module who's output in turn was connected to an electronic cable release. By adjusting the delay to correspond with the pellets piercing the lit light bulbs I captured the filaments still lit with the hot gasses escaping before the bulb actually exploded. I recocked the shutter after each exposure and changed the bulb and filter 3 times. The repeatability of both the electronic and mechanical timing was critical.

Note : This shot could not have been achieved using open flash technique as the lit bulbs would have totally washed out the image.



CAMERA

Medium format camera

120mm macro lens

SETUP

A light bulb socket was firmly mounted to a table over a black backdrop. A pellet gun was mounted to a V support to keep the end of the barrel 48 inches from the bulb. A sound trigger was placed in close to pick up the sound of the gun going off. The sound trigger was connected to the input of a delay module

who's output in turn was connected to an electronic cable release. By adjusting the delay to correspond with the pellet piercing the lit light bulb I captured it just starting to explode with its filaments still lit .

Note : The exposure was 1/15 sec. at F16. A reflective ambient meter reading was taken of the lit bulb for the burning filament portion of the exposure while a flash meter was used to adjust the flash output to match the ambient F16 reading. This shot could not have been achieved using open flash technique as the lit bulbs would have totally washed out the image.



CAMERA

35mm camera

150mm lens attached to bellows

SETUP

A laser trigger was placed above the rim of the glass to catch the liquid splashing up and out of the glass. This was easier than trying to hit the laser beam with the high pressure squirt from a hand held turkey baster. A delay module was used to adjust the delay for the liquid to peak before triggering an electronic cable release . The glass was sitting on a white plexiglass surface with a soft-light placed

underneath. The gray shading was added later in Photoshop. I often use long lenses for selective focus and when working with small objects.



CAMERA

Medium format camera
120mm macro lens
Short extension tube

SETUP

Two medium sized soft-lights were used. A laser trigger was aligned across the inner throat of the iris so when the hummingbird came in to drink the nectar her beak would break the beam. A delay module was used to delay the trigger

signal long enough for the bird to finish inserting her beak before an electronic cable release tripped the shutter. After everything is setup there's nothing to do but go and sit in a lawn chair until your strobes go off and then it's time to recock the shutter and take another break. **The exposure** was 1/500 sec. at F22 with electronic flash. The ambient exposure would have been 1/8 sec. at F22 which put the ambient light 6 stops down from the flash exposure. This is one of those times where it really is nice having a flash sync speed of 1/500 sec. as the ambient light had no effect on the image.



CAMERA

Medium format camera

120mm macro lens

Short extension tube

SETUP

Two medium sized soft lights were used. A laser trigger was aligned across the inner throat of the iris so when the hummingbird came in to drink the necktar her

beak would break the beam. A delay module was used to delay the trigger signal long enough for the bird to finish inserting her beak before an electronic cable release tripped the shutter. After everything is setup theres's nothing to do but go and sit in a lawn chair until your strobes go off and then its time to recock the shutter and take another break. The exposure was 1/500 sec. at F22 with electronic flash. The ambient exposure would have been 1/8 sec. at F22 which put the ambient light 6 stops down from the flash exposure. This is one of those times where it really is nice having a flash sync speed of 1/500 sec. as the ambient light had no effect on the image.



CAMERA

Medium format camera

120mm macro lens

Short extension tube

SETUP

Two medium sized soft-lights were used. The first was placed behind the flowers and was actually used as the entire background surface. The second softlight was placed to the right of the lens. A

white fill card was placed to the left of the lens. A laser trigger was aligned across the inner throat of the iris so when the hummingbird came in to drink the nectar her beak would break the beam. A delay module was used to delay the trigger signal long enough for the bird to finish inserting her beak before an electronic cable release tripped the shutter. After everything is setup there's nothing to do but go and sit in a lawn chair until your strobes go off and then it's time to recock the shutter and take another break.



CAMERA

35mm camera

150mm lens mounted on a bellows

SETUP

The glass of tea was backlit with a soft-light and a laser trigger placed above the top of the glass to catch the liquid swirling over the acrylic ice cubes. A delay module was used to vary the delay for a series of shots. An electronic cable release was used to trip the shutter with

the strobe connected to the PC output on the shutter.



CAMERA

35mm camera

90mm macro lens

SETUP

A laser trigger was placed above the top of the glass and a delay module was used to adjust for the splash before triggering an electronic cable release. The Martini glass was sitting on a backdrop of glass with lighting from above and below. You will find that with objects as small and light as the rose bud I used that it requires a fair amount

of velocity to create a splash. In many cases it would be just as easy if not better to place the laser across the point where the splash is intended to peak and simply use less delay.



CAMERA

35mm camera

50mm macro lens

SETUP

This shot of grapes being dropped into the tray of water used 2 soft-lights and 2 small strobes to highlight the splash. A large black darkroom tray was used to contain the water with the surface of

the softlight reflected in the water. A laser trigger was used with the beam set about 3 inches above the surface of the water. One of the strobe was connected to the delayed PC output of the delay module and the other strobes were slaved. Delay was adjusted to capture the grapes just entering the water and beginning to splash.



CAMERA

35mm camera

150mm lens attached to a bellows

SETUP

I placed a medium sized soft-light with a red gel attached behind a large black darkroom tray filled with water. Two small soft lights were

placed to the sides for fill. A laser trigger was aligned over the top of the water with a turkey baster mounted on a crossbar over the tray to assure the drips would break the beam. A delay module was used to delay the triggersignal long enough for the water drop to form before an electronic cable release tripped the shutter. By blowing smoke right at the water surface small ripples did not allow a perfect drop to form.



CAMERA

35mm camera

150mm lens attached to a bellows

SETUP

A laser trigger was placed above the top of the glass with 2 soft-lights to the left and right. A delay module was used to adjust the delay long enough for the liquid hit bottom and start back up the sides of the glass before triggering an electronic cable release . The backdrop was silver fabric and is out of focus enough to avoid seeing the texture of the weave. I often use long lenses for selective focus and when working with small

objects I find they produces a more natural perspective.



CAMERA

35mm camera

150mm lens attached to a bellows

SETUP

This shot of a smashing bottle was achieved by placing a piece of mylar on a small background stand with 18 inches of the mylar sheet laying on a concrete floor. A soft-light was placed behind the mylar with a second soft-light placed at the front right of the impact area. I used a sound trigger to detect the bottle hitting the floor. The sound trigger was connected to a delay module which in turn was connected to an electronic cable release.

I stood on a step ladder and released the bottle from about 60 inches aiming at a small X on the mylar as my target. It wasn't a exactly a bulls-eye but the shot worked well anyway.



CAMERA

35mm camera

150mm lens attached to a bellows

SETUP

This shot of a smashing bottle was achieved by placing a piece of mylar on a small background stand with 18 inches of the mylar sheet laying on a concrete floor. A soft-light was placed behind the mylar with a second soft-light placed at the

front right of the impact area. I used a sound trigger to detect the bottle hitting the floor. The sound trigger was connected to a delay module which in turn was connected to an electronic cable release. I stood on a step ladder and released the bottle from about 60 inches aiming at a small X on the mylar as my target. It wasn't a exactly a bullseye but the shot worked well anyway.



CAMERA

Medium format camera
135mm Macro lens

SETUP

This shot of a soft drink can being tossed into a pool of water used 2 soft-lights and 2 small strobes to highlight the splash. A small kiddie pool spray painted blue was

used to contain the water and several bags of ice were added. A laser trigger was used with the beam set about 6 inches above the surface of the water. One of the strobe was connected to the delayed PC output of the delay module and the other strobes were slaved. Delay was adjusted to capture the can beginning to entering the water.