

# Celebrate with AEROTECHNICS™

(Improved 1998 model. rip cord firing, prism color! )

## "POCKET CANNON"™

(HAND HELD, 8" x 1".

**EFFECT:** The user has the ability to produce a spectacular simulated fireworks display, on stage, with out the risk of fire! This device, when loaded properly, will safely propel paper streamers and/or confetti to distances of up to 30 feet! The end result resembles a cascading display of fireworks-like streamers!! This device uses no explosive gunpowder but rather a much safer propellant, a disposable 8 ounce CO<sub>2</sub> cylinder.

**LOADING:** Load in at least one ounce of confetti (if desired) and pack to the bottom. If no confetti is used, a lifting cup should be pushed into bottom. (See lifting cup sheet) This acts as a bottom propellant sealer and helps eject your streamers further. Next, proceed to load your choice of streamers into the barrel. Load-in 12' or 18' streamers by handfuls of five, (see streamer instructions). You may use a blunt instrument to push streamers down. NOTE: they should be packed (pushed) in snug but do not jam or pound in the rolls too tight as this will cause them to crush and not open properly. Repeat the loading step several times to reach your desired capacity. Most people fill their devices between 1/2 and 3/4 full. Note: Due to added backpressure a full load goes further and looks best. If you have the room and you want streamers to shoot further and like to hear a sudden POP SOUND, a backpressure cap will do this. See backpressure cap sheet.

**ARMING:** Important... the lever with the firing cord must be in the closed position before screwing in the CO<sub>2</sub> cartridge. Now proceed to screw in a new 8 gram CO<sub>2</sub> cylinder into the threaded hole on the side of the black valve. **Warning:** At this point, device is now activated and can be fired by yanking the rip cord. For best visual results, fire upwards in an area with the most ceiling clearance. In rooms less than 12 feet high, angle your shot slightly and do not use a backpressure cap. Caution: Avoid shooting into overhead light fixtures.

**HANDLING/FIRING** There are many ways to hold the gun as you will quickly discover. However, we suggest that you simply try holding the unit at chest level, with barrel pointing straight up. Hold the lower part of the barrel with your left hand and position the CO<sub>2</sub> cylinder so it faces away from you. Next, loop any two right fingers into the rip cord and give a hard yank!! Best method for holding the barrel is with the trigger facing away from you, then yanked back towards you. Try this action before screwing in a live CO<sub>2</sub>. Note that if trigger is yanked too slowly cannon will fire sluggish or not at all. For maximum thrust, the lever trigger cord must be forcefully and quickly yanked back! Note: One CO<sub>2</sub> is needed for each firing. For reloading, repeat the above steps and screw in a new cylinder.

**RESULTS:** The results you can expect depend on several factors such as the type material used, size of barrel, method of packing and the pressure of the cylinder! The best way to accomplish a desired effect is by trial and error. When beginning, log in a notebook the style or way you are loading and what you load. Eventually you will assemble your own standard guidelines. However, should you need any technical assistance or problems arise, feel free to call us

**SAFETY:** Needless to say, never point the muzzle directly at anyone. When using, keep away from spectators and always aim up over everyone's head. Use caution when installing and removing the CO<sub>2</sub> cartridge. It gets very cold after firing! Do not attempt to remove the assembly nut on the valve. To do so may cause leakage and blow-back or may damage valve. If you have any problems or questions, you should call us at once.

Never use the pocket cannon around any open flames, i.e., birthday cake candles, stove, Sterno (canned heat), etc.! Streamers included in this kit are not flameproof!!

Celebrate with

2

# AEROTECHNICS!™

## 18' CANNON STREAMERS

**NOTICE:** These streamers are not flameproof. Do not use in areas where they may contact hot theatrical lighting, cigarettes, candles, stoves, fans, chandeliers, etc. For areas of concern, we recommend using flameproof paper streamers and/or confetti. See other safety warnings below!

Standard size: 120 rolls x 1/4" wide

**FOR USE:** Pick up a streamer group containing five coils. Allow the center coils to drop into your palm, thus, separating them from the outer lead-wrap. Rip off this lead and discard. Next, load streamers into the barrel but make sure each roll has a few inches of lead paper on it. Repeat this step several times until you reach your required load size. To be visually effective, load in at least 6 coil groups into a Pocket Cannon and 12-24 groups into the 20" model. If you are using a larger cannon, to be visually effective, load in as much as your budget permits (streamers and/or confetti) as the load size reflects the effect size. Rule of thumb - the bigger the (25-50') streamer, the further the travel. In other words, if the coil or streamer is longer it is heavier and thus travels further. Also the wider the coil, the slower it opens. Therefore, 1/2" coils need to be shot up higher so they can be seen unwrapping on the way down. If your operating in a low ceiling auditorium, (under 16 foot) best results are gained by using 18' streamers. If you are shooting on a 45° angle and you need more streamer travel, simply use the longer, 25 or 50' size. See bulletin #5 & 6.

**RESULTS:** The results you can expect depend on several factors such as the type material used, size of barrel, method of packing and the pressure of the cylinder and wind conditions, if any. Shooting results will vary between cannon models. The best way to accomplish a desired effect is by trial and error. When beginning, log in a notebook the style or way you are loading and what you load. Eventually you will assemble your own standard guidelines. For best results, keep CO2 cylinder at room temperature prior to use. Consult CO2 data sheet. However, should you need any technical assistance, feel free to call us.

**SAFETY: WARNING - NEVER USE AEROTECHNIC PRODUCTS IF THERE ARE ANY OPEN FLAMES PRESENT!** Never point the muzzle directly at anyone. Whether your using air or CO2, always aim up over people's heads. Take precautions so you do not hit any overhead objects and be sure to allow for plenty of distance between your cannon and the spectators around you. Never shoot straight out or across at floor level. Also take caution in preventing any foreign material from getting into barrel. All devices should be loaded and fired by qualified personnel only. Warning: CO2 container gets extremely cold after firing. Do not remove spent cartridge without a glove or rag. It takes approximately 5 minutes for cartridge to warm-up so it can be handled safely. If you have any questions, you should call us at once.

**SUPPLIES:** Replacement parts, cylinders, streamers, confetti and other incidentals are available directly from us or your local supplier. Other models are also available which will allow you to double your load size and shoot to greater distances. Consult our catalog! Remember: The more streamers that you put into the device, the more startling and visual the effect!

© Copyright 1995 by Special F/X, Inc.

## Lifting Cups: Function/Purpose

Helps thrust cannon payload further when used!

Bulletin #2

A lifting cup is a thin double-backed paper cup that fits inside the barrel of most Aerotechnic™ devices. Essentially, it acts as an elevator and lifts the payload up evenly. When it lifts, it spreads open and holds back the gas by forming a tight inner wall seal. This in turn maximizes your pushing power because no gas escapes between the paper products inside. The cup also provides a small cargo area that lifts some of the payload to a high point and then dumps it! This is especially good for small (1 ounce) amounts of Aerofetti™. The user will find that when using lifting cups, the streamer load will stay compacted and travel to greater heights (10-50%). In turn, the product will function more efficiently and in some cases, a smaller CO<sub>2</sub> cylinder can be used, decreasing your operating costs! NOTE: Smaller devices such as the wand and pistol do not need backpressure caps or lifting cups.

Lifting Cup Installation: Select the proper cup that fits the inside of your empty barrel. Squeeze the cup so that one end fits into the barrel. Once the front section is started in, the back section will funnel in easily. Use a ramrod to push the lifting cup to the bottom of the barrel. You now can ~~load any safe product of your choice into the device. Since the lifting cups~~ are thin and of poor aerodynamic design, they will usually not travel far. However, you do not want to hit anyone as they may sting! So when using cups, a good rule to follow is -

**"DON'T AIM DIRECTLY AT ANYONE!"**

TIPS: In addition to shooting streamers and Aerofetti™, most of our devices will also shoot large pedal confetti, sparkle confetti, flour (smoke), feathers, soft food (jello/cake), silks, soft toys, lightweight tokens, playing cards, play or real dollar bills, parachutes, business cards, popcorn and water!..... Actually, anything that is light, soft and has no pointed corners, can be fired out! For a water cannon effect, omit all paper products and fill cannon with water only!

FYI.....White streamers glow radiantly under UV lighting and/or look like smoke trails, whereas red and orange streamers look like fire streaks!

Our Aerostreamers™ have been aerodynamically designed for maximum travel and spread in the air. **WARNING: NEVER USE AEROTECHNIC™ PRODUCTS IF THERE ARE ANY OPEN FLAMES PRESENT!**

If you have any ideas you would like to share with us, please let us know! Your ideas and suggestions will be published in our upcoming newsletter entitled "Aerotechnic News"™.

Copyright 8/27/90 by Special F/X, Inc. All rights reserved.

## Back-pressure Caps: Function/Purpose

**Creates bang and propels streamers further when used!**

Bulletin #1

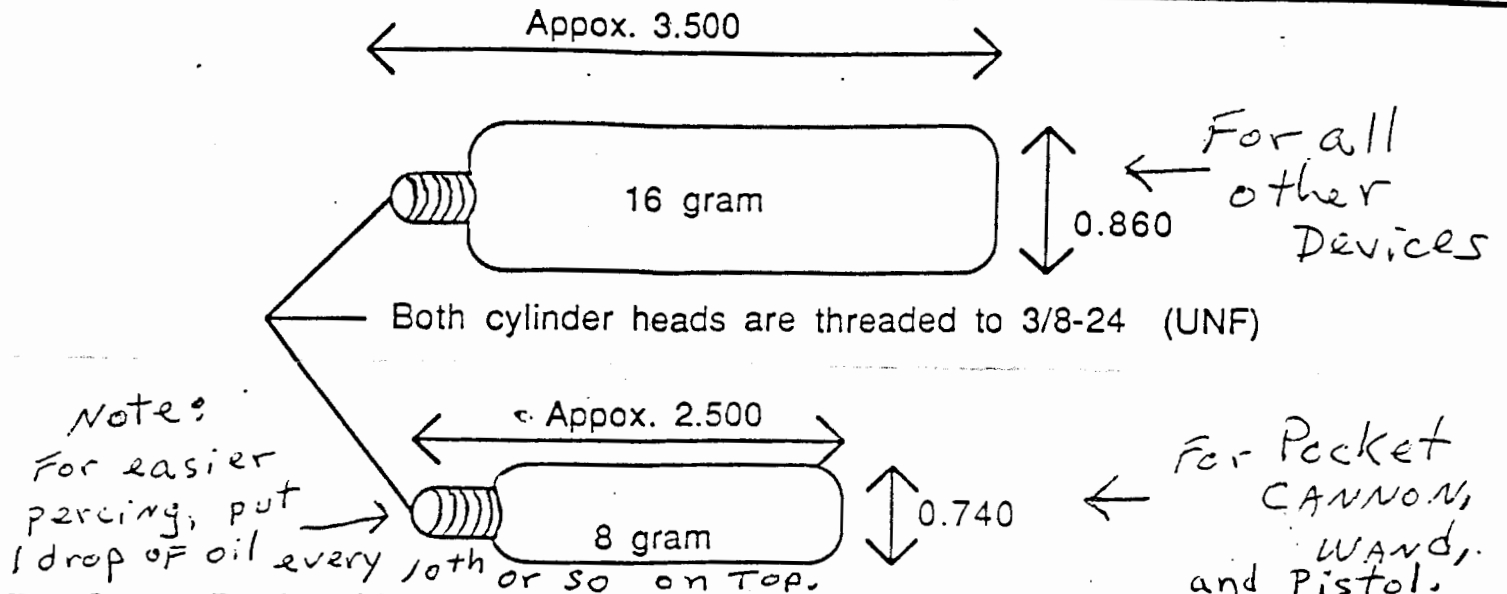
A **back-pressure cap** is nothing more than a thin paper cap or cup that fits externally over 1" or 2" Aerotechnic™ barrels. Essentially, they hold back pressure until enough is built up to force the pressure cap to blow off!! When they do, a semi-concussive sound is heard. The user will find, when using caps, the streamer load will travel much further (about 30%) and the product will function more efficiently. In some cases, a smaller CO2 cylinder can be used, decreasing your operating costs! There are two basic cap styles that could be used: the o.d. cover cap and the i.d. plug. However, we have had best results from the o.d. cover cap. This cap fits over the muzzle end of the barrel and must be taped, air tight, in place.

Normally, without using an o.d. cap, a streamer device can be safely shot towards people with little fear of injury as long as you are at least 20 feet away. If you are firing up and over the top of a crowd, it doesn't matter how close you are because the streamers and/or disk cap are now falling by gravity at a lower rate of speed. However, when using a back-pressure cap there is added danger created by the flying cap after it is blown off!! The only safe way to fire a unit is upward or if truss mounted, downwards in the stage area only. Since the caps are thin and of poor aerodynamic design, they will usually not travel far but I would not want to get hit with one as they do sting! So when using caps, a good rule to follow is - **"DON'T AIM DIRECTLY AT ANYONE!"..... WARNING: NEVER USE AEROTECHNIC PRODUCTS IF THERE ARE OPEN FLAMES PRESENT!**

**O.D. - Cap Installation:** Select the proper cap that fits the outside of your loaded barrel. Slip the cap over and snug it down. **IMPORTANT:** With masking tape, neatly tape two full turns around the side of the barrel and cap. Stagger the wrap so it overlaps both the barrel and the cap. VERY IMPORTANT: After taping, roll your hand around the tape, pressing to form a tight air seal. When firing, you should notice an increased kick, sound and streamer travel. This is your starting point. If you want your shot a little stronger, wrap additional turns of tape around the side. If the bang is too loud or the cannon fails to fire, simply use less tape around the side. **WARNING:** Too much tape or the use of DUCT TAPE can cause a dangerous condition. Use only masking tape!! **NEVER** exceed more than four side turns. Never tape over the top of the cap on any hand held device. The top must be allowed to split or tear off freely, like a pressure release gasket.

**TIPS:** For additional product performance, all devices should be bottom primed with a soft piece of lift wadding or lifting cup. (See bulletin #2) This can be done with an actual lifting cup or a soft napkin wad. Simply crumble it up and insert it into the bottom of the barrel prior to loading streamers. NOTE: special high performance lifting cups are included with all 1 & 2" diameter model units and are recommended for best results and/or highest shot of product.

# CO<sub>2</sub> CYLINDER SPECIFICATION CHART Bulletin #4 4/94



The Carbon Dioxide (CO<sub>2</sub>) cylinder has an internal pressure rating ranging from 700-900 psi. At room temperature the pressure is about 845 psi. Certain precautions are therefore advised when handling. To avoid bursting, do not expose to heat beyond 140 degrees F or store in direct sunlight. To avoid possible freezer burn (after activating) do not remove frozen container for several seconds. For best performance results, keep cylinders at room temperature prior to use. FACT: Cold weather exposure greatly reduces internal pressure. Example: At 32° F pressure is at 491 psi. At 2° F pressure is 302 psi. At minus 20° pressure is only 200 psi. So if used, out of doors, on a cold day, keep them in your chest pocket, at body temperature, until ready for use.

**Transportation Notice:** CO<sub>2</sub> shipments are usually made by UPS ground under the ORM-D consumer commodity code. Note that: UPS Air shipments containing CO<sub>2</sub> can now be made (domestic only). There is however an extra charge for this service.

Federal Express® will also accept CO<sub>2</sub> as dangerous goods (UN 1013) and deliver them anywhere in the U.S. and to certain foreign countries. However, some countries will not allow direct Fedex deliveries of compressed gas, through customs. To avoid disappointment, check with your local Fedex office or call our office to see if we can ship to you! Note: CO<sub>2</sub> is banned from being sent through the U.S. and international postal system.

**Airport to Airport Service:** In the event that Fedex does not offer direct service of dangerous goods to your area, there is another way. We can ship CO<sub>2</sub> to a large airport in your country but you will be responsible for customs clearance. This usually involves hiring a customs broker to clear the goods. Airport to airport service is less costly than regular service but a bit slower. This alternative is not feasible unless you are importing large amounts of product and have a full understanding with customs procedures. Before ordering, consult your local Fedex or customs office about CO<sub>2</sub>.

**Warning:** Like all other pressurized containers, CO<sub>2</sub> is restricted from being carried in your luggage on passenger air flights. To avoid confiscation & delays, we advise you to check with your airline for the proper procedure or ship it ahead by Fedex. We have distributors in Singapore, London, Australia and Canada. If you can't find the threaded CO<sub>2</sub> in your area, call us, perhaps we can help you locate a supplier. Use the above illustration for comparison.

**Note:** The threaded type CO<sub>2</sub> charge is not to be confused with the non threaded, small neck, BB gun or paint ball gun type that is found in hobby shops. Due to its unique application, the threaded type is found in very few consumer outlets. However, our warehouse maintains an adequate supply with inexpensive prices and can ship on short notice.

**How Safe is CO<sub>2</sub>?** Next to compressed air, CO<sub>2</sub> is the safest form of propulsion you could ask for. However, because the CO<sub>2</sub> containers are pressurized, they are classified as dangerous goods when sent by air and restricted material when sent by ground. As you may already know, CO<sub>2</sub> is widely used in fire extinguishers and produces the bubbles in carbonated drinks. The threaded type CO<sub>2</sub> is also used by defense contractors as a component part in missile guidance and coolant systems. The origin of the CO<sub>2</sub> cylinder is said to date back to 1885 and was first used as a disposable refill for a soda siphon device in Europe.