Le Maitre Ltd

Co2 propelled Electric Air Cannon Instructions

& Loading instructions for Chinese Confetti, Streamers and Glitter

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Licenced Manufacturers – Explosives Act 1875

The electric air cannon comes in 2 main parts. The first part is the metal body, which houses the electronics. This main body contains a mains powered solenoid that thrusts forward a sharp metal firing pin.

The second part of the cannon is the barrel. The barrel is a 2-inch plastic tube that holds the effect. The barrel is clipped onto the front of the main body over the co2 bulb

You will need a Co2 bulb, which screws into the thread at the front of the main body. When the unit is fired the pin bursts the Co2 bulb and all of the pressure inside the bulb is released into the barrel and pushes the effect out.

The cannon can be filled with anything that will not cause injury as it falls back to the ground. The main effects that are used in the cannon are Confetti, Glitter and Streamers. We have however put various things in the cannons including T Shirts, Condoms, Water, Jelly Babies and Bank Notes.

The cannon is supplied with a Powercon plug on the supply lead and a Powercon socket on the back of the cannon. This allows the cannons to be daisychained.

The controller has 4 channels, a fire button and a key switch. The controller is capable of firing up to 10 cannons in one hit. To fire the cannon you need to ensure that the power is on, select the channel switch for the channel you wish to fire, insert and turn the key clockwise and press the button. Very rarely a cannon may not fire because of insufficient current and voltage at the end of a long cable run. It is advisable to press the fire button 3 or 4 times so that the pin hammers the bulb and ensures it punctures, also If you have more than 5 cannons on the same channel you should do the same.

The cannons can either be floor standing on a board or easily adapted to be truss mounted on a G clamp. Wherever possible you should truss mount the cannons because you will always get a better effect and a better spread.

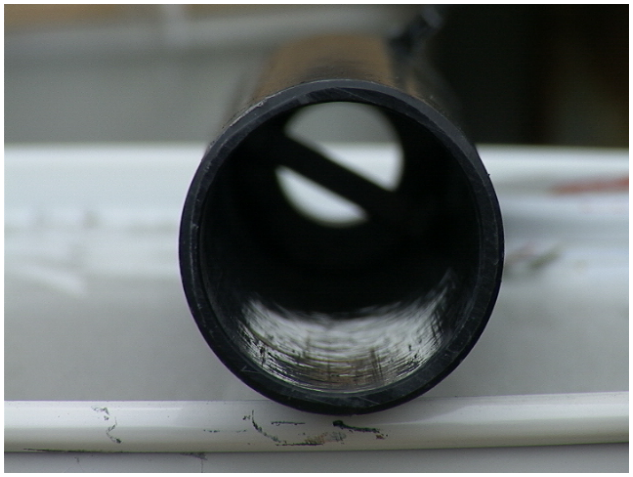
Setup and loading Instructions:

The solenoid unit mounted on a board

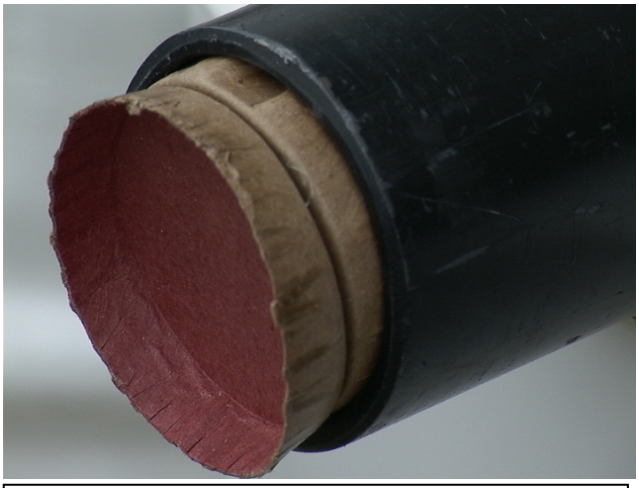
The solenoid unit mounted on a “G” Clamp

Inserting the Lifting Cap

The lifting Cap must be used for all types of filling



Check that the barrel is empty.
You can see the metal stopper at the end.



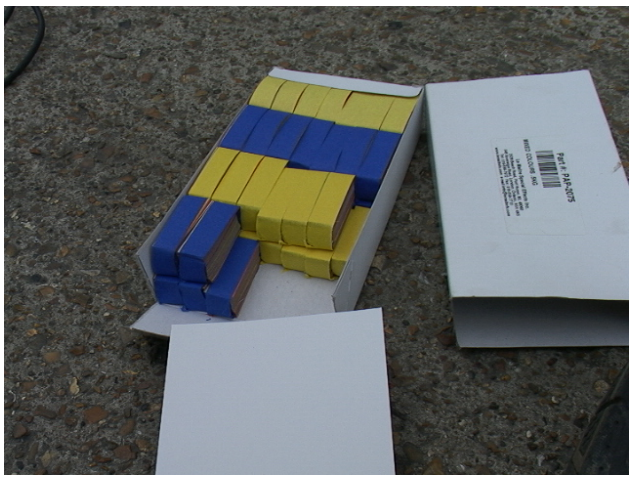
Insert the Lifting Cap into the barrel.

You may have to push the edges in to make it fit.

Using a stick, push the lifting cap all the way into the barrel until it hits the metal stopper and will not go any further.
If you are doing it correctly you will hear a distinctive whoosh sound.

When the stick will not go any further, remove it and load the tube.

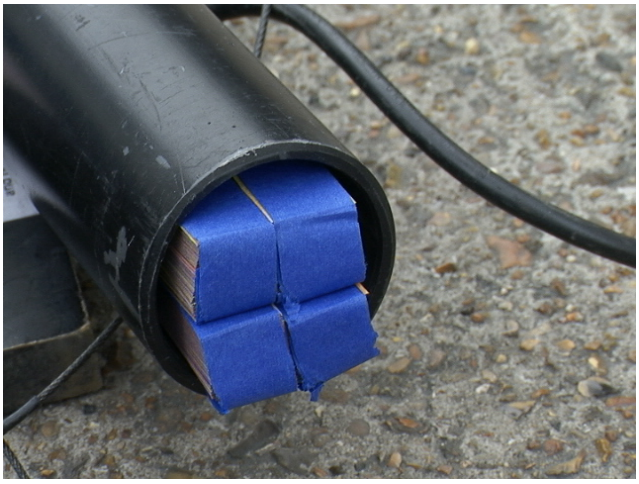
Loading Chinese Confetti



Open the box of Chinese Confetti and lower the opened end of the box. Remove the piece of card that separates the two layers.

Carefully remove 4 wads of the confetti.

Place the 4 wads of confetti into the barrel, do not push them to the end or tip the barrel to make them slide down, doing so may make the top two wads fall off and behind thus limiting the amount of confetti you can get into the barrel.



Place another 4 wads into the barrel, as you push the new 4 in it will slide the others down the tube.

Keep inserting confetti until no more will fit, it is important that no confetti wads stick out from the end of the barrel.

The barrel will hold just under ¼ of a kilo of Chinese Confetti

When the barrel is full put on a Back Pressure Cap (see Below)

Loading Streamers

This is how the streamers are packaged, work out how many streamers you have and how many need to go into each cannon.
Count and separate the streamers now whilst they still have the tape on them and won't unravel.

Each streamer is held together with tape to prevent them from unravelling in the bag. Other types of streamers may look slightly different, but they will have some tape on them somewhere.

Peel the tape off and throw it away.

Drop the streamers into the barrel, it does not matter if they unravel once they are in the barrel.

The barrel can be filled up with hundreds of streamers, in reality between 40 and 80 is a good number to use.

When the barrel is full put on a Back Pressure Cap (see Below)

Loading Glitter

When loading glitter take a small handful and feel if it is stuck together, if it is, run your hand through the bag to break it up. The Glitter sticks together if condensation forms in the bag and it then dries out, if the Glitter keeps sticking together after breaking it up sprinkle a small amount of Talcum Powder into the bag and mix it in – this should help.

Push the glitter into the tube in small handfuls, after every 2 or 3 handfuls turn the barrel vertical and tap it 3 or 4 times on a firm surface so the glitter falls to the lifting cap end – **NEVER PACK OR RAM GLITTER INTO THE TUBE BECAUSE IT MAY MISFIRE.**
The tube will take just under Half a Kilo of Glitter.
When the barrel is full put on a Back Pressure Cap (see Below)

Back Pressure Cap

The Back Pressure Cap must be used for all types of filling

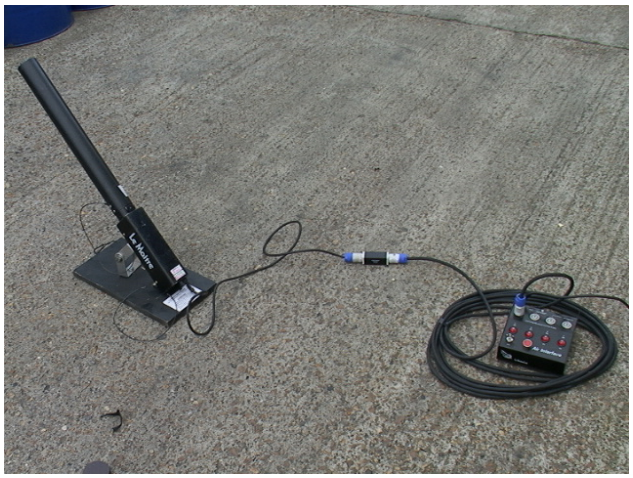
Place the back pressure cap over the end of the barrel, this stops the contents from falling out and helps give a more “explosive “ pop as the unit fires, the back pressure cap also helps propel the contents further.

Using a roll of PVC or Masking tape, tape on the Back Pressure cap securely going around one and a half times.
Don’t worry about the cap not coming off, it will – even if you use too much tape the pressure will make the contents burst through the paper.

Wiring the Cannons, Controller and Assembling

Connect the cannons connector into the coupler on an extension cable.

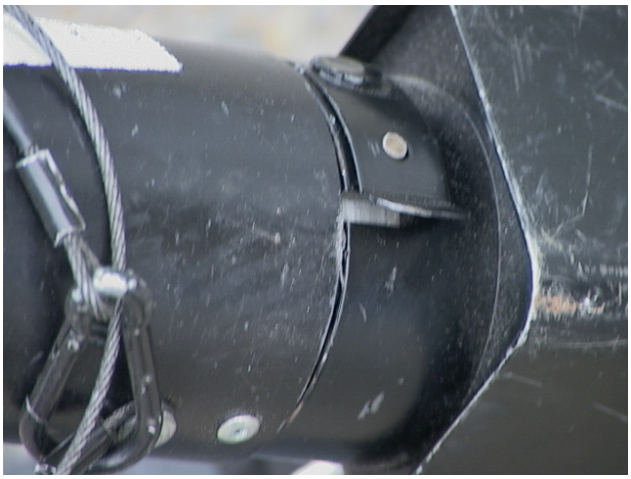
Connect the other end of the extension into one of the controller's outputs.



When wired the setup should look like this.

Screw a new Co2 bulb into the end of the solenoid unit until it stops.

Place the loaded barrel over the Co2 Bulb.
Note the barrel has 2 pins, these pins mate with 2 slots on the solenoid unit.



Twist the barrel counter clockwise until the barrel locks into place. A clip on the solenoid unit prevents the barrel being accidentally twisted. Connect the safety chain to the aluminium bracket.

On the back of the cannon there is a powercon socket. This allows another cannon to be linked in. Up to 10 cannons can be daisy chained on each channel (only 10 cannons can only be fired at any one time).

Here we have an example of where 2 cannons have been daisy chained. Both cannons can be fired from one supply cable, you can go further and add up to 8 more cannons on this line.

Here we have two 16g Co2 bulbs.

The one on the left is new and unused.

The one on the right has been used, you can tell because there is a hole where the firing pin has punctured the end. This bulb is now useless.

This is what happens when the cannon is fired and there is no barrel attached.

In normal operation all of the released gas pressure can only exit through the barrel, this lifts the back pressure cap, Squashes the contents behind the back pressure cap then the cap gives way and the contents are propelled from the barrel.

IMPORTANT!
ENSURE ALL AIR CANNONS ARE SECURED AND SAFETY WIRE/SAFETY CHAINS ARE ATTACHED.

CHECK TRAJECTORY OF CANNONS – ENSURE THE PROXIMITY OF LIGHT BULBS AND VULNERABLE OR FRAGILE ITEMS ARE ISOLATED AND SAFE FROM POTENTIAL IMPACT.