PICRIC ACID

Picric acid, also known as Tri-Nitro-Phenol, or T.N.P., is a military explosive that is most often used as a booster charge to set off another less sensitive explosive, such as T.N.T. It another explosive that is fairly simple to make, assuming that one can acquire the concentrated sulfuric and nitric acids. Its procedure for manufacture is given in many college chemistry lab manuals, and is easy to follow. The main problem with picric acid is its tendency to form dangerously sensitive and unstable picrate salts, such as potassium picrate. For this reason, it is usually made into a safer form, such as ammonium picrate, also called explosive D. A social deviant would probably use a formula similar to the one presented here to make picric acid.

MATERIALS

phenol (9.5 g)

concentrated sulfuric acid (12.5 ml)

concentrated nitric acid (38 ml)

distilled water

EQUIPMENT

500 ml flask

adjustable heat source

1000 ml beaker or other container suitable for boiling in

filter paper and funnel

glass stirring rod

1) Place 9.5 grams of phenol into the 500 ml flask, and carefully add 12.5 ml of concentrated sulfuric acid and stir the mixture.

2) Put 400 ml of tap water into the 1000 ml beaker or boiling container and bring the water to a gentle boil.

3) After warming the 500 ml flask under hot tap water, place it in the boiling water, and continue to stir the mixture of phenol and acid for about thirty minutes. After thirty minutes, take the flask out, and allow it to cool for about five minutes.

4) Pour out the boiling water used above, and after allowing the container to cool, use it to create an ice bath, similar to the one used in section 3.13, steps 3-4. Place the 500 ml flask with the mixed acid an phenol in the ice bath. Add 38 ml of concentrated nitric acid in small amounts, stirring the mixture constantly. A vigorous but "harmless" reaction should occur. When the mixture stops reacting vigorously, take the flask out of the ice bath.

5) Warm the ice bath container, if it is glass, and then begin boiling more tap water. Place the flask containing the mixture in the boiling water, and heat it in the boiling water for 1.5 to 2 hours.

6) Add 100 ml of cold distilled water to the solution, and chill it in an ice bath until it is cold.

7) Filter out the yellowish-white picric acid crystals by pouring the solution through the filter paper in the funnel. Collect the liquid and dispose of it in a safe place, since it is corrosive.

8) Wash out the 500 ml flask with distilled water, and put the contents of the filter paper in the flask. Add 300 ml of water, and shake vigorously.

9) Re-filter the crystals, and allow them to dry.

10) Store the crystals in a safe place in a glass container, since they will react with metal containers to produce picrates that could explode spontaneously.

NITROGLYCERINE

Nitroglycerine is one of the most sensitive explosives, if it is not the most sensitive. Although it is possible to make it safely, it is difficult. Many a young anarchist has been killed or seriously injured while trying to make the stuff. Usually, as soon as it is made, it is converted into a safer substance, such as dynamite. An idiot who attempts to make nitroglycerine would use the following procedure:

MATERIAL	EQUIPMENT
distilled water	eye-dropper
table salt	100 ml beaker
sodium bicarbonate	200-300 ml beakers (2)
concentrated nitric	ice bath container acid (13 ml) (a plastic bucket serves well)
concentrated sulfuric	centigrade thermometer acid (39 ml) blue litmus paper glycerine

1) Place 150 ml of distilled water into one of the 200-300 ml beakers.

2) In the other 200-300 ml beaker, place 150 ml of distilled water and about a spoonful of sodium bicarbonate, and stir them until the sodium bicarbonate dissolves. Do not put so much sodium bicarbonate in the water so that some remains undissolved.

3) Create an ice bath by half filling the ice bath container with ice, and adding table salt. This will cause the ice to melt, lowering the overall temperature.

4) Place the 100 ml beaker into the ice bath, and pour the 13 ml of concentrated nitric acid into the 100 ml beaker. Be sure that the beaker will not spill into the ice bath, and that the ice bath will not overflow into the beaker when more materials are added to it. Be sure to have a large enough ice bath container to add more ice. Bring the temperature of the acid down to about 20 degrees centigrade or less.

5) When the nitric acid is as cold as stated above, slowly and carefully add the 39 ml of concentrated sulfuric acid to the nitric acid. Mix the two acids together, and cool the mixed acids to 10 degrees centigrade. It is a good idea to start another ice bath to do this.

6) With the eyedropper, slowly put the glycerine into the mixed acids, one drop at a time. Hold the thermometer along the top of the mixture where the mixed acids and glycerine meet. DO NOT ALLOW THE TEMPERATURE TO GET ABOVE 30 DEGREES CENTIGRADE; IF THE TEMPERATURE RISES ABOVE THIS TEMPERATURE, RUN LIKE HELL!!! The glycerine will start to nitrate immediately, and the temperature will immediately begin to rise. Add glycerine until there is a thin layer of glycerine on top of the mixed acids. It is always safest to make any explosive in small quantities.

7) Stir the mixed acids and glycerine for the first ten minutes of nitration, adding ice and salt to the ice bath to keep the temperature of the solution in the 100 ml beaker well below 30 degrees centigrade. Usually, the nitroglycerine will form on the top of the mixed acid solution, and the concentrated sulfuric acid will absorb the water produced by the reaction.

8) When the reaction is over, and when the nitroglycerine is well below 30 degrees centigrade, slowly and carefully pour the solution of nitroglycerine and mixed acid into the distilled water in the beaker in step 1. The nitroglycerine should settle to the bottom of the beaker, and the water-acid solution on top can be poured off and disposed of. Drain as much of the acid-water solution as possible without disturbing the nitroglycerine.

9) Carefully remove the nitroglycerine with a clean eye-dropper, and place it into the beaker in step 2. The sodium bicarbonate solution will eliminate much of the acid, which will make the nitroglycerine more stable, and less likely to explode for no reason, which it can do. Test the nitroglycerine with the litmus paper until the litmus stays blue. Repeat this step if necessary, and use new sodium bicarbonate solutions as in step 2.

10) When the nitroglycerine is as acid-free as possible, store it in a clean container in a safe place. The best place to store nitroglycerine is far away from anything living, or from anything of any value.

Nitroglycerine can explode for no apparent reason, even if it is stored in a secure cool place.

R.D.X.

R.D.X., also called cyclonite, or composition C-1 (when mixed with plasticisers) is one of the most valuable of all military explosives. This is because it has more than 150% of the power of T.N.T., and is much easier to detonate. It should not be used alone, since it can be set off by a not-too severe shock. It is less sensitive than mercury fulminate, or nitroglycerine, but it is still too sensitive to be used alone. R.D.X. can be made by the surprisingly simple method outlined hereafter. It is much easier to make in the home than all other high explosives, with the possible exception of ammonium nitrate.

MATERIALS

hexamine or methenamine

fuel tablets (50 g)

concentrated nitric acid (550 ml)

distilled water

table salt

ice

ammonium nitrate

EQUIPMENT

500 ml beaker

glass stirring rod

funnel and filter paper

ice bath container(plastic bucket)

centigrade thermometer

blue litmus paper

1) Place the beaker in the ice bath, (see section 3.13, steps 3-4) and carefully pour 550 ml of concentrated nitric acid into the beaker.

2) When the acid has cooled to below 20 degrees centigrade, add small amounts of the crushed fuel tablets to the beaker. The temperature will rise, and it must be kept below 30 degrees centigrade, or dire consequences could result. Stir the mixture.

3) Drop the temperature below zero degrees centigrade, either by adding more ice and salt to the old ice bath, or by creating a new ice bath. Or, ammonium nitrate could be added to the old ice bath, since it becomes cold when it is put in water. Continue stirring the mixture, keeping the temperature below zero degrees centigrade for at least twenty minutes

4) Pour the mixture into a litre of crushed ice. Shake and stir the mixture, and allow it to melt. Once it has melted, filter out the crystals, and dispose of the corrosive liquid.

5) Place the crystals into one half a litre of boiling distilled water. Filter the crystals, and test them with the blue litmus paper. Repeat steps 4 and 5 until the litmus paper remains blue. This will make the crystals more stable and safe.

6) Store the crystals wet until ready for use. Allow them to dry completely using them. R.D.X. is not stable enough to use alone as an explosive.

7) Composition C-1 can be made by mixing 88.3% R.D.X. (by weight) with 11.1% mineral oil, and 0.6% lecithin. Kneed these material together in a plastic bag. This is a good way to desensitize the explosive.

8) H.M.X. is a mixture of T.N.T. and R.D.X.; the ratio is 50/50, by weight. it is not as sensitive, and is almost as powerful as straight R.D.X.

9) By adding ammonium nitrate to the crystals of R.D.X. after step 5, it should be possible to desensitize the R.D.X. and increase its power, since ammonium nitrate is very insensitive and powerful. Soduim or potassium nitrate could also be added; a small quantity is sufficient to stabilize the R.D.X.

10) R.D.X. detonates at a rate of 8550 meters/second when it is compressed to a density of 1.55 g/cubic cm.

PLASTIQUE EXPLOSIVE FROM ASPIRIN

This explosive is a phenol dirivative. It is toxic and explosive compounds made from picric acid are poisonous if inhaled, ingested, or handled and absorbed through the skin. The toxicity of this explosive restrict's its use due to the fact that over exposure in most cases causes liver and kidney failure and sometimes death if immediate treatment is not obtained.

This explosive is a cousin to T.N.T. but is more powerful than it's cousin. It's the first explosive used militarily and was adopted in 1888 as an artillery shell filler. Originally this explosive was derived from coal tar but thanx to modern chemistry you can make this explosive easily in approximately three hours from acetylsalicylic acid (aspirin purified).

This procedure involves dissolving the acetylsalicylic acid in warm sulfuric acid and adding sodium or potassium nitrate which nitrates the purified aspirin and the whole mixture drowned in water and filtered to obtain the final product. This explosive is called trinitrophenol. Care should be taken to ensure that this explosive is stored in glass containers. Picric acid will form dangerous salts when allowed to contact all metals exept tin and aluminum. These salts are primary explosive and are super sensitive. They also wall cause the detonation of the picric acid.

Next needed is aspirin. The cheaper brands work best but buffered brands should be avoided. Powder these tablets to a fine consistancy. To extract the acetylsalicylic acid from this powder place this powder in methyl alcohol and stir vigorously. Not all of the powder will dissolve. Filter this powder out of the alcohol. Again wash this powder that was filtered out of the alcohol with more alcohol but with a lesser amount than the first extraction. Again filter the remaining powder out of the alcohol. Combine the now clear alcohol and allow it to evaporate in a pyrex dish. When the alcohol has evaporated there will be a surprising amount of crystals in the bottom of the pyrex dish.

Take fourty grams of these purified acetylsalicylic acid crystals and dissolve them in 150 ml. of sulfuric acid (98%, specify gravity 1.8) and heat to dissolve all the crystals. This heating can be done in a common electric frying pan with the thermostat set on 150 deg. F. and filled with a good cooking oil.

When all the crystals have dissolved in the sulfuric acid take the beaker, that you've done all this dissolving in (600 ml.), out of the oil bath. This next step will need to be done with a very good ventilation system (it is a good idea to do any chemistry work such as the whole procedure and any procedure in this file with good ventilation or outside). Slowly start adding 58 g. of sodium nitrate or 77 g. of potassium nitrate to te acid mixture in the beaker very slowly in small portions with vigorous stirring. A red gas (nitrogen trioxide) will be formed and this should be avoided. The mixture is likely to foam up and the addition should be stopped until the foaming goes down to prevent the overflow of the acid mixture in the beaker. When the sodium or potassium nitrate has been added the mixture is allowed to cool somewhat (30- 40 deg. C.). The solution should then be dumped slowly into twice it's volume of crushed ice and water. The brilliant yellow crystals will form in the water.

These should be filtered out and placed in 200 ml. of boiling distilled water. This water is allowed to cool and then the crystals are then filtered out of the water. These crystals are a very, very pure trinitrophenol. These crystals are then placed in a pyrex dish and places in an oil bath and heated to 80 deg. C. and held there for 2 hours. This temperature is best maintained and checked with a thermometer. The crystals are then powdered in small quantities to a face powder consistency. These powdered crystals are then mixed with 10% by weight wax and 5% vaseline which are to melting temperature and poured into the crystals.

The mixing is best done by kneading together with gloved hands. This explosive should have a useful plsticity range of 0-40 deg. C.. The detonation velocity should be around 7000 m/sec.. It is toxic to handle but simply made from common ingredients and is suitable for most demolition work requiring a moderately high detonation velocity. It is very suitable for shaped charges and some steel cutting charges. It is not as good an explosive as C-4 or other R.D.X. based explosives but it is much easier to make. Again this explosive is very toxic and should be treated with great care. AVOID HANDLING BARE-HANDED, BREATHING DUST AND FUMES, AVOID ANY CHANCE OF INGESTION. AFTER UTENSILS ARE USED FOR THE MANUFACTURE OF THIS EXPLOSIVE RETIRE THEM FROM THE KITCHEN AS THE CHANCE OF POISONING IS NOT WORTH IT, IF MANUFACTURED AS ABOVE, AHOULD BE SAFE IN STORAGE BUT WITH ANY HOMEMADE EXPLOSIVE STORAGE OS NOT RECOMENDED AND EXPLOSIVES SHOULD BE MADE UP AS NEEDED. A V O I D C O N T A C T W I T H A L L M E T A L S E X E P T T I N A N D A L U M I N U M ! ! !

CHEMICAL FIRE BOTTLE

The chemical fire bottle is really an advanced molotov cocktail. Rather than using the burning cloth to ignite the flammable liquid, which has at best a fair chance of igniting the liquid, the chemical fire bottle utilizes the very hot and violent reaction between sulfuric acid and potassium chlorate. When the container breaks, the sulfuric acid in the mixture of gasoline sprays onto the paper soaked in potassium chlorate and sugar. The paper, when struck by the acid, instantly bursts into a white flame, igniting the gasoline. The chance of failure to ignite the gasoline is less than 2%, and can be reduced to 0%, if there is enough potassium chlorate and sugar to spare.

MATERIALS	EQUIPMENT
potassium chlorate (2 teaspoons)	glass bottle (12 oz.)
sugar (2 teaspoons)	cap for bottle,with plastic inside
concentrated sulfuric acid (4 oz.)	cooking pan with raised edges
gasoline (8 oz.)	paper towels
	glass or plastic cup and spoon

1) Test the cap of the bottle with a few drops of sulfuric acid to make sure that the acid will not eat away the bottle cap during storage. If the acid eats through it in 24 hours, a new top must be found and tested, until a cap that the acid does not eat through is found. A glass top is excellent.

2) Carefully pour 8 oz. of gasoline into the glass bottle.

3) Carefully pour 4 oz. of concentrated sulfuric acid into the glass bottle. Wipe up any spills of acid on the sides of the bottle, and screw the cap on the bottle. Wash the bottle's outside with plenty of water. Set it aside to dry.

4) Put about two teaspoons of potassium chlorate and about two teaspoons of sugar into the glass or plastic cup. Add about 1/2 cup of boiling water, or enough to dissolve all of the potassium chlorate and sugar.

5) Place a sheet of paper towel in the cooking pan with raised edges. Fold the paper towel in half, and pour the solution of dissolved potassium chlorate and sugar on it until it is thoroughly wet. Allow the towel to dry.

6) When it is dry, put some glue on the outside of the glass bottle containing the gasoline and sulfuric acid mixture. Wrap the paper towel around the bottle, making sure that it sticks to it in all places. Store the bottle in a place where it will not be broken or tipped over.

7) When finished, the solution in the bottle should appear as two distinct liquids, a dark brownish-red solution on the bottom, and a clear solution on top. The two solutions will not mix. To use the chemical fire bottle, simply throw it at any hard surface.

8) NEVER OPEN THE BOTTLE, SINCE SOME SULFURIC ACID MIGHT BE ON THE CAP, WHICH COULD TRICKLE DOWN THE SIDE OF THE BOTTLE AND IGNITE THE POTASSIUM CHLORATE, CAUSING A FIRE AND/OR EXPLOSION.

9) To test the device, tear a small piece of the paper towel off the bottle, and put a few drops of sulfuric acid on it. The paper towel should immediately burst into a white flame.

'C-2' AND 'C-3'PLASTIC EXPLOSIVE COMPOUND.

This article will cover the production of plastic explosives of the type 'C-2' and 'C-3'. These are highly undesirable because of certain trait each has and they don't produce as much power as 'C' and 'C-4' compounds.

It is not recamended you make these two types of plastique, this article was written for imformatative purposes only. (Just so you can act like you know what you are doing).

Composition 'C-2' is harder to make than 'C-4' and is TOXIC TO HANDLE. It is also unstable in storage and is poor choice for home explosive manufature. It also has a lower detonation velocity than either 'C-4' or 'C-3'.

It is manufactured in a steam jacketed (heated) melting kettle using the same procedure used in incorperation of 'C-3'. Its composition is as follows:

R.D.X..... 80%
(Equal parts of them following:)
Mononitrotolulene
Dinitrotolulene
T.N.T. guncotton
Dimethylformide..... 20%
(See Below for rest of recipe)

'C-3' was developed to eliminate the undesirable aspects of 'C-2'. It was standardized and adopted by the military as following composition:

R.D.X..... 77%
Mononitrotolulene.... 16%
Dinitrotolulene..... 5%
Tetryl..... 1%
T.N.T. guncotton..... 1%

'C-3' is manufactured by mixing the plastisizing agent in a steam jacketed melting kettle equipped with a mechanical stirring attachment.The kettle is heated to 90-100 degrees Celcius and the stirrer is activated.Water wet R.D.X.is added to the plastisizing agent and the stirring is continued until a uniform mixture is obtained and all water has been driven off. Remove the heat source but continue to stir the mixture until it has cooled to room temperature. This explosive is as sensitive to impact as is T.N.T. Storage at 65 degrees Celcius for four months at a relative humidity of 95% does not impair it's explosive properties.

'C-3' is 133% as good as an explosive as good as an explsive as is T.N.T. The major drawback of 'C-3' is its volatility which causes it to lose 1.2% of its weight although the explosives detonation properties are not affected.
Water does not affect explosives preformance. It therefore is very good for under-water demolition uses and would be a good choice for such an aplication. When stored at 77 degrees Celcius considerable extrudation takes place. It will become hard at -29 degrees Celcius and is hard to detonate at this tempurature. While this explosive is not unduely toxic, it should be handled with care as it contains aryl-nitro compounds which are absorbed through the skin. It will reliably take detonation from a #6 blasting cap but the use of a booster is always suggested. This explosive has a great blast effect and was still is avaliable in standard demolition blocks. Its detonation velocity is approximately 7700 M/second.

BLACK POWDER

First made by the Chinese for use in fireworks, black powder was first used in weapons and explosives in the 12th century. It is very simple to make, but it is not very powerful or safe. Only about 50% of black powder is converted to hot gasses when it is burned; the other half is mostly very fine burned particles. Black powder has one major problem: it can be ignited by static electricity. This is very bad, and it means that the material must be made with wooden or clay tools. Anyway, a misguided individual could manufacture black powder at home with the following procedure:

MATERIALS	EQUIPMENT
potassium nitrate (75 g)	clay grinding bowl and clay grinder
or	or
sodium nitrate (75 g)	wooden salad bowl and wooden spoon
sulfur (10 g)	plastic bags (3)
charcoal (15 g)	300-500 ml beaker (1)
distilled water	coffee pot or heat source

1) Place a small amount of the potassium or sodium nitrate in the grinding bowl and grind it to a very fine powder. Do this to all of the potassium or sodium nitrate, and store the ground powder in one of the plastic bags.

2) Do the same thing to the sulfur and charcoal, storing each chemical in a separate plastic bag.

3) Place all of the finely ground potassium or sodium nitrate in the beaker, and add just enough boiling water to the chemical to get it all wet.

4) Add the contents of the other plastic bags to the wet potassium or sodium nitrate, and mix them well for several minutes. Do this until there is no more visible sulfur or charcoal, or until the mixture is universally black.

5) On a warm sunny day, put the beaker outside in the direct sunlight. Sunlight is really the best way to dry black powder, since it is never too hot, but it is hot enough to evaporate the water.

6) Scrape the black powder out of the beaker, and store it in a safe container.wPlastic is really the safest container, followed by paper. Never store black powder in a plastic bag, since plastic bags are prone to generate static electricity.

AMMONIUM TRIIODIDE CRYSTALS

Ammonium triiodide crystals are foul-smelling purple colored crystals that decompose under the slightest amount of heat, friction, or shock, if they are made with the purest ammonia (ammonium hydroxide) and iodine. Such crystals are said to detonate when a fly lands on them, or when an ant walks across them. Household ammonia, however, has enough impurities, such as soaps and abrasive agents, so that the crystals will detonate when thrown,crushed, or heated. Upon detonation, a loud report is heard, and a cloud of purple iodine gas appears about the detonation site. Whatever the unfortunate surface that the crystal was detonated upon will usually be ruined, as some of the iodine in the crystal is thrown about in a solid form, and iodine is corrosive. It leaves nasty, ugly, permanent brownish-purple stains on whatever it contacts. Iodine gas is also bad news, since it can damage lungs, and it settles to the ground and stains things there also. Touching iodine leaves brown stains on the skin that last for about a week, unless they are immediately and vigorously washed off. While such a compound would have little use to a serious terrorist, a vandal could utilize them in damaging property. Or, a terrorist could throw several of them into a crowd as a distraction, an action which would possibly injure a few people, but frighten almost anyone, since a small crystal that not be seen when thrown produces a rather loud explosion. Ammonium triiodide crystals could be produced in the following manner:

Materials	Equipment
iodine crystals	funnel and filter paper
clear ammonia (ammonium hydroxide, for the suicidal)	paper towels
	two throw-away glass jars

1) Place about two teaspoons of iodine into one of the glass jars. The jars must both be throw away because they will never be clean again.

2) Add enough ammonia to completely cover the iodine.

3) Place the funnel into the other jar, and put the filter paper in the funnel. The technique for putting filter paper in a funnel is taught in every basic chemistry lab class: fold the circular paper in half, so that a semi-circle is formed. Then, fold it in half again to form a triangle with one curved side. Pull one thickness of paper out to form a cone, and place the cone into the funnel.

4) After allowing the iodine to soak in the ammonia for a while, pour the solution into the paper in the funnel through the filter paper.

5) While the solution is being filtered, put more ammonia into the first jar to wash any remaining crystals into the funnel as soon as it drains.

6) Collect all the purplish crystals without touching the brown filter paper, and place them on the paper towels to dry for about an hour. Make sure that they are not too close to any lights or other sources of heat, as they could well detonate. While they are still wet, divide the wet material into about eight chunks.

7) After they dry, gently place the crystals onto a one square inch piece of duct tape. Cover it with a similar piece, and gently press the duct tape together around the crystal, making sure not to press the crystal itself. Finally, cut away most of the excess duct tape with a pair of scissors, and store the crystals in a cool dry safe place. They have a shelf life of about a week, and they should be stored in individual containers that can be thrown away, since they have a tendency to slowly decompose, a process which gives off iodine vapors, which will stain whatever they settle on. One possible way to increase their shelf life is to store them in airtight containers. To use them, simply throw them against any surface or place them where they will be stepped on or crushed.

MERCURY FULMINATE

Mercury fulminate is perhaps one of the oldest known initiating compounds. It can be detonated by either heat or shock, which would make it of infinite value to a terrorist. Even the action of dropping a crystal of the fulminate causes it to explode. A person making this material would probably use the following procedure:

MATERIALS	EQUIPMENT
mercury (5 g)	glass stirring rod
concentrated nitric acid (35 ml)	100 ml beaker (2)
ethyl alcohol (30 ml)	adjustable heat source
distilled water	blue litmus paper
	funnel and filter paper

1) In one beaker, mix 5 g of mercury with 35 ml of concentrated nitric acid, using the glass rod.

2) Slowly heat the mixture until the mercury is dissolved, which is when the solution turns green and boils.

3) Place 30 ml of ethyl alcohol into the second beaker, and slowly and carefully add all of the contents of the first beaker to it. Red and/or brown fumes should appear. These fumes are toxic and flammable.

4) After thirty to forty minutes, the fumes should turn white, indicating that the reaction is near completion. After ten more minutes, add 30 ml of the distilled water to the solution.

5) Carefully filter out the crystals of mercury fulminate from the liquid solution. Dispose of the solution in a safe place, as it is corrosive and toxic.

6) Wash the crystals several times in distilled water to remove as much excess acid as possible. Test the crystals with the litmus paper until they are neutral. This will be when the litmus paper stays blue when it touches the wet crystals

7) Allow the crystals to dry, and store them in a safe place, far away from any explosive or flammable material.

This procedure can also be done by volume, if the available mercury cannot be weighed. Simply use 10 volumes of nitric acid and 10 volumes of ethanol to every one volume of mercury.

FUSE IGNITION

The oldest form of explosive ignition, fuses are perhaps the favorite type of simple ignition system. By simply placing a piece of waterproof fuse in a device, one can have almost guaranteed ignition. Modern waterproof fuse is extremely reliable, burning at a rate of about 2.5 seconds to the inch. It is available as model rocketry fuse in most hobby shops, and costs about $3.00 for a nine-foot length. Fuse is a popular ignition system for pipe bombers because of its simplicity. All that need be done is light it with a match or lighter.

Of course, if the Army had fuses like this, then the grenade, which uses fuse ignition, would be very impracticle. If a grenade ignition system can be acquired, by all means, it is the most effective. But, since such things do not just float around, the next best thing is to prepare a fuse system which does not require the use of a match or lighter, but still retains its simplicity. One such method is described below:

MATERIALS
strike-on-cover type matches
electrical tape or duct tape
waterproof fuse

1) To determine the burn rate of a particular type of fuse, simply measure a 6 inch or longer piece of fuse and ignite it. With a stopwatch, press the start button the at the instant when the fuse lights, and stop the watch when the fuse reaches its end. Divide the time of burn by the length of fuse, and you have the burn rate of the fuse, in seconds per inch. This will be shown below:

Suppose an eight inch piece of fuse is burned, and its complete time of combustion is 20 seconds.

20 seconds
DDDDDDDDDD = 2.5 seconds per inch.
8 inches

If a delay of 10 seconds was desired with this fuse, divide the desired time by the number of seconds per inch:

10 seconds
DDDDDDDDDDDDDDDDDD = 4 inches
2.5 seconds / inch

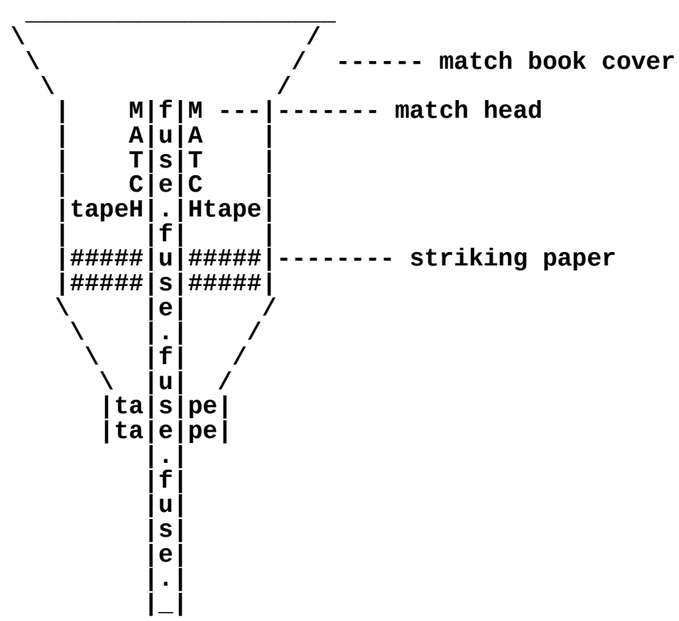
NOTE: THE LENGTH OF FUSE HERE MEANS LENGTH OF FUSE TO THE POWDER. SOME FUSE, AT LEAST AN INCH, SHOULD BE INSIDE THE DEVICE. ALWAYS ADD THIS EXTRA INCH, AND PUT THIS EXTRA INCH AN INCH INTO THE DEVICE!!!

2) After deciding how long a delay is desired before the explosive device is to go off, add about 1/2 an inch to the premeasured amount of fuse, and cut it off.

3) Carefully remove the cardboard matches from the paper match case. Do not pull off individual matches; keep all the matches attached to the cardboard base. Take one of the cardboard match sections, and leave the other one to make a second igniter.

4) Wrap the matches around the end of the fuse, with the heads of the matches touching the very end of the fuse. Tape them there securely, making sure not to put tape over the match heads. Make sure they are very secure by pulling on them at the base of the assembly. They should not be able to move.

5) Wrap the cover of the matches around the matches attached to the fuse, making sure that the striker paper is below the match heads and the striker faces the match heads. Tape the paper so that is fairly tight around the matches. Do not tape the cover of the striker to the fuse or to the matches. Leave enough of the match book to pull on for ignition.



The match book is wrapped around the matches, and is taped to itself. The matches are taped to the fuse. The striker will rub against thmatcheads when the match book is pulled.

6) When ready to use, simply pull on the match paper. It should pull the striking paper across the match heads with enough friction to light them. In turn, the burning matcheads will light the fuse, since it adjacent to the burning match heads.

TEAR GAS

A terrorist who could make tear gas or some similar compound could use it with ease against a large number of people. Tear gas is fairly complicated to make, however, and this prevents such individuals from being able to utilize its great potential for harm. One method for its preparation is shown below.

EQUIPMENT

1. ring stands (2)
2. alcohol burner
3. erlenmeyer flask, 300 ml
4. clamps (2)
5. rubber stopper
6. glass tubing
7. clamp holder
8. condenser
9. rubber tubing
10. collecting flask
11. air trap
12. beaker, 300 ml

MATERIALS

10 gms glycerine

2 gms sodium bisulfate

distilled water

1.) In an open area, wearing a gas mask, mix 10 gms of glycerine with 2 gms of sodium bisulfate in the 300 ml erlenmeyer flask.

2.) Light the alcohol burner, and gently heat the flask.

3.) The mixture will begin to bubble and froth; these bubbles are tear gas.

4.) When the mixture being heated ceases to froth and generate gas, or a brown residue becomes visible in the tube, the reaction is complete. Remove the heat source, and dispose of the heated mixture, as it is corrosive.

5.) The material that condenses in the condenser and drips into the collecting flask is tear gas. It must be capped tightly, and stored in a safe place.

FIRECRACKERS

A simple firecracker can be made from cardboard tubing and epoxy. The instructions are below:

1) Cut a small piece of cardboard tubing from the tube you are using.

"Small" means anything less than 4 times the diameter of the tube.

2) Set the section of tubing down on a piece of wax paper, and fill it with epoxy and the drying agent to a height of 3/4 the diameter of the tubing. Allow the epoxy to dry to maximum hardness, as specified on the package.

3) When it is dry, put a small hole in the middle of the tube, and insert a desired length of fuse.

4) Fill the tube with any type of flame-sensitive explosive. Flash powder, pyrodex, black powder, potassium picrate, lead azide, nitrocellulose, or any of the fast burning fuel-oxodizer mixtures will do nicely. Fill the tube almost to the top.

5) Pack the explosive tightly in the tube with a wad of tissue paper and a pencil or other suitable ramrod. Be sure to leave enough space for more epoxy.

6) Fill the remainder of the tube with the epoxy and hardener, and allow it to dry.

7) For those who wish to make spectacular firecrackers, always use flash powder, mixed with a small amount of other material for colors. By crushing the material on a sparkler, and adding it to the flash powder, the explosion will be the same color as the sparkler. By adding small chunks of sparkler material, the device will throw out colored burning sparks, of the same color as the sparkler. By adding powdered iron, orange sparks will be produced. White sparks can be produced from magnesium shavings, or from small, LIGHTLY crumpled balls of aluminum foil.

Example: Suppose I wish to make a firecracker that will explode with a red flash, and throw out white sparks. First, I would take a road flare, and finely powder the material inside it. Or, I could take a red sparkler, and finely powder it. Then, I would mix a small amount of this material with the flash powder. (NOTE: FLASH POWDER MAY REACT WITH SOME MATERIALS THAT IT IS MIXED WITH, AND EXPLODE SPONTANEOUSLY!) I would mix it in a ratio of 9 parts flash powder to 1 part of flare or sparkler material, and add about 15 small balls of aluminum foil I would store the material in a plastic bag overnight outside of the house, to make sure that the stuff doesn't react. Then, in the morning, I would test a small amount of it, and if it was satisfactory, I would put it in the firecracker.

8) If this type of firecracker is mounted on a rocket engine, professional to semi-professional displays can be produced.

SMOKE SCREENS

An interestiong aspect of explosives is the extra ingredients which can be added to give the explosion characteristics it would not normally have. A somke bomb is like this, in sense that it is not only useful to create confusion and chaos, but also for smoking persons out of an enclosed area, as well as signaling.

Formulas for the preparation of a black smoke screen:

1) magnesium powder 19
   hexachloroethane 60
   naphthalene 21

2) magnesium powder 20
   hexachloroethane 60
   naphthalene 20

3) hexachloroethane 55.8
   alpha naphol 14
   athracene 4.6
   aluminum powder 9.3
   smokless powder 14
   naphthalene 2.3

4) black powder FFF 50
   potassium nitrate 10
   coal tar 20
   powdered charcoal 15
   paraffin 5

Formulas for the preparation of a white smoke screen:

1) potassium chlorate 44
   sulfur flour 15
   zinc dust 40
   sodium bicarbonate 1

2) zinc dust 28
   zinc oxide 22
   hexachloroethane 50

3) zinc dust 66.67
   hexachloroethane 33.33

Formulas for the preparation of a yellow smoke screen:

1) potassium chlorate 25
   paranitraniline 50
   lactrose 25

2) potassium chlorate 30
   naphthalene azodimethyl aniline 50
   powdered sugar 20

3) potassium chlorate 21.4
   naphthalene 50
   azodimethyl aniline 2.7
   auramine 38
   sodium bicarbonate 28.5

Formulas for the preparation of a green smoke screen:

1) potassium nitrate 20
   red arsenic 20
   sulfer flour 20
   antimony sulfide 20
   black powder FFF 20

Formulas for the preparation of a red smoke screen:

1) potassium chlorate 20
   lactose 20
   paranitraniline red 60

2) potassium chlorate 26
   diethylaminorosindone 48
   powdered sugar 26

3) potassium chlorate 27.4
   methylaminoanthraquinone 42.5
   sodium bicarbonate 19.5
   sulfur flour 10.6

4) potassium perchlorate 25
   antimony sulfide 20
   rhodamine red 50
   dextrin 5

M80's:

The hardest part with making M-80's is the powder. The kind of powder that you want is the silver type used in firecrackers. It is made of Potassium Perchlorate KCIO , Aluminium & Sulfur.

You can take apart firecrackers (slow and time consuming)...or, you can make it out of the above ingredients (fast, AND FUN). Get each of these in as fine of powder as you can. Obtain a postage or any small scale and mix them BY WEIGHT in the folloing ratios.

1 part - Powdered sulfur
1 part - Powdered Aluminium
2 parts - Potassium Perchlorate KCIO

I have known people to make M-80's with Potassium Nitrate instead of Potassium Perchlorate before. It works, but certainly not as well.

Stir the powder well with a piece of wood in a plastic or glass bowl (as long as it is non-sparking).

Next, you will need something to contain the powder in. Get some thick cardboard tubing with a diameter of 1/2 to 3/4" You can find tubing anywhere. I have found a gold mine at stores, I just grab the Cardboard tubes register receipt tape is wrapped around. The thicker the sides of the tube are, the better. The actual M-80 I have seen. (Not Home Made) is 1 1/2" long and has a diameter of 1/2".

Third, you will need fuse. Go to some sporting goods store and ask for 'cannon fuse'. They usually carry it under that name. If at all possible, get it waterproof (more on that later).Or if you are the cheap type you can always pull it out of some firecrackers!

Now all you need is something for the ends. You can cuts wooden discs the same diameter as your tubing or you can do what I do and use a good old hot glue gun to seal the ends (don't worry about the hot glue igniting the powder, it won't)

To Assemble:
Put one endplug into one end of the tubing, with whatever method you are using (again, hot glue is best), let it dry, harden or whatever it has to do. Drill your fuse hole in the center of the tube. Put in the fuse and pour the powder.

Hydrogen Pressure Device:

Materials Needed: Bottle or jar, acid, aluminum foil, cloth [optional].

Seltzer Bottles have given better results overall, but a jar will usually do the job. A strong cap or lid is also needed to prevent the hydrogen gas from escaping. Many acids [or even bases] will work with the aluminum foil. We have had success with muriatic acid [which is inexpensive, and easy to get] and hydrochloric acid. A base such as Milk of Magnesia or Liquid Plumr should also work with the aluminum foil. If you are using an acid, other metals besides aluminum should work. Zinc and magnesium are two such metals.

Procedure: Fill approximately 1/6 of your bottle with your acid/base. Put two or three rolled up, cigar-shaped pieces of aluminum foil in the bottle, and when ready, cap tightly. Shake the bottle to cover all of the aluminum with acid, and quickly get out of the area. A typical explosion will spread glass over a 35 yard radius. You can experiment with your materials to find the optimum amounts of acid/base and metal that you will need. Caution must be used with fast reactions [i.e. Hydrochloric acid with Zinc] so that the bomb won't explode too too early. To achieve a "fireball" effect, tie a burning cloth to the bottle. When the explosion occurs, the flaming rag will ignite the released hydrogen; producing a brief fireball.

Observations: The explosion is relatively loud; being greater than that of a shotgun firing. Debris is usually spread over a 25-35 yard radius. On occaision, it will take several minutes for the bomb's pressure to build up. If you are unsure about the state of the device, we recommend that you wait at least 5 minutes before going near the bomb. You might want to break the bottle from a distance by shooting it with a gun or throwing rocks at it. We cannot emphasize how important it is for you to clear the area as quickly as possible. Don't waste time by messing with the burning cloth! If you're going to use the cloth, ignite it quickly. We had one of these blow up only seconds after we cleared the area. One should value his life more than he values a comparatively worthless bomb!

Carbon Dioxide Pressure Device:

Materials: Bottle or jar, dry ice, water [optional].

As with the hydrogen device, we have had greater success with seltzer bottles than with jars. Once again, it is assumed that you have a good cap or lid to prevent the carbon dioxide gas from escaping. Dry Ice can usually be bought from an ice cream store for under $1.50 a pound. Dry ice does not keep long [it becomes gaseous at -109 F] and refridgeration will help little. Water can be used to speed up the device's reaction.

Procedure: Break the dry ice into chunks that will fit in your bottle. The more dry ice you have, the faster the reaction. Cap the bottle tightly, and quickly clear the area. If you need a fast reaction, add water to the bottle before capping. The reaction's speed increases with warmer water. Be careful not to get a reaction that is too fast. People have had these devices blow up in their faces because they used hot water and didn't clear the area fast enough. Take into consideration the temperature of your site and excercise caution on hot days. We strongly advise against using hot water in this bomb! [Unless, of course, you have a death wish]

Observations: The is a very economical and simple bomb. It can be extremely dangerous if the user is careless. By using water of different temperatures, one can roughly control the speed of this bomb's reaction. We've had a few close calls with this bomb, so we don't use water in it anymore. The reaction goes fast enough without water.

Carbon Dioxide Pressure Device II:

Materials: Bottle or jar, baking soda, vinegar, tissue paper.

This is another carbon dioxide producing bomb. It is generally less effective than the two previous bombs we have described.

Procedure: Fill about 1/5 of your bottle with vinegar. Next take some tissue paper [Kleenex or toilet paper] and wrap it around as much baking soda as possible. You may want to use a few pieces of tissue paper. The more tissue paper you use, the longer the delay will be for the reaction. When ready, drop the wrapped baking soda into the bottle, cap the bottle *quickly*, and [need we say?] run! If the bomb never explodes, that means there wasn't enough pressure. On your next try, add more vinegar and use more baking soda.

Observations: Experimentation is the key to perfecting this bomb. Of course, be extremely careful, and don't stick around after capping. The materials for this bomb are common household items, making it more convienient to produce than the other two bombs.

Acetylene Pressure Device:

Materials: Jar, calcium carbide, water, cardboard.

This is a very deadly device. Carbide, when in contact with water, produces the ultra-flammable acetylene gas.

Procedure: Fill about 1/3 of the jar with water. Next, cut out a piece of cardboard that is roughly the diameter of the jar. Push this inside the jar about 1/2 way. Don't let it touch the water! The cardboard should stay where you put it if it's big enough. Now put some carbide onto the cardboard. You don't want the carbide to touch the water. Cap the jar, and when ready, turn it upsidown and shake it a little. The jar should violently explode shortly thereafter. If you want, leave a burning rag next to the bottle and you'll have a fireball. Have the rag lit before you shake the jar! Don't waste any time next to the jar after shaking it! This is a very deadly bomb, and you don't want to be its victim.

Observations: This is a very dangerous, yet spectacular bomb. Needless to say, it's also quite loud. If you don't know where to get carbide, try a good sporting goods store. It's used in some miner's lamps.

Chlorine Pressure Device:

Materials: Small-medium sized jar, 1 or 2 large test tubes, acid, bleach.

This is a fairly tricky bomb to make. Clorine is not a good gas to mess with so use care with this device. Chlorine can blind you and damage your lungs.

Procedure: Fill one test tube with acid, and fill 1/3 of the jar with bleach. Put the acid filled test tube in the jar and tape it to the side of the jar. If your jar is large, you will want to fill two test tubes with acid. When ready, cap the jar and turn it upside-down. Run to a nice viewing location and watch the explosion! Don't go too near; chlorine is powerful stuff.

Observations: This pressure device not only makes a nice explosion, but spreads chlorine around the area. Try to get a small jar and big test tubes for this bomb. If you have a big jar and small test tubes, there won't be enough pressure to cause an explosion

Phosgene Pressure Device:

Materials: Small-medium sized jar, 1 or 2 large test tubes, ammonia, bleach.

This bomb has the same setup as the chlorine bomb, but uses ammonia instead of acid to react with the bleach. Phosgene is also a dangerous gas and was used in World War I in chemical weapons.

Procedure: Use the same procedure as the chlorine device, but use ammonia instead of acid. First, try putting the ammonia in the test tube and the bleach in the jar. If that doesn't create enough pressure put the ammonia in the jar and the bleach in the test tube.

Observations: This is almost identical to the chlorine bomb. The only difference is that they make different gasses. These last two bombs are not as reliable as other bombs in this manuscript, but you can experiment to get the best results.

School Defense

Several years ago, when I attended public school, I was very aware of the dangers faced by anyone in America's public education system, and the lack of security and safty provided by the facilities. This file will explain how to make several componants of the Captain Hack School Defense kit, a set of weapons and other useful items well disguised as common school accessories. You can make or use as few or many as you wish, and not all are applicable to all situations or all needs. Use what you hafta.

1) Pencil Pick
An ice pick is always a handy tool/weapon...if only it could be concealed. Now it can. Start with a brand new pencil, unsharpened. Take a hand drill (or a SLOW elec drill) and drill out ONLY the rod of graphite. Now get a small length of metal rod (available at most hobby shops) about the same diam. Cut off a suitable length, and put a little super glue on the rod. Insert it into the pencil, with about 1/4" coming out of the pencil. After the glue sets up, sharpen the pencil like normal. You should now have a 1/2" or so metal point. Use a pair of wire cutters to snip the end at an angle so you have a sharp point.

[Uses: stabbing, scratching, scribing, keying cars, maybe popping tires]

2) Breath Spray
A small bottle of breath spray, like Binacca or something similar can be used for a variety of reasons: First, it can be used as a mace, being that these sprays are about 40% alchohol. Secondly, they can be used as an aerosol flamethrower, in the classic way.
[Uses: defense spray, flamethrower]

3) Ruler Edge
Have you ever seen those wooden rulers that have the little metal edge? Using a sharpening stone, you can hone this edge to a blade. It may take a while, but it should be useful.

[Uses: cutting, scratching]

4) Pen Bomb
A small ordinance explosive can be a handy thing to have, and this is a great one, as well as being a good smoke device if needed. Get a regular white BIC pen, and remove the tube of ink and the tip, but leave the part that the tip came out of in the pen. Fill the pen with Rocket Powder (see POLUMNA.TXT) and replace the colored part near the tip (that you saved). Feed the fuse through this tip, and put the cap on like normal. Now you have a smoke/noise device that looks quite normal, so long as you don't remove the cap.

[Uses: smoke, noise, light demolition, distraction]

5) Cl Componants
Two bottles of white out are only moderatly suspiscious, and thus make great containers for, among other things, Ammonia and Chlorine Bleach. Empty and wash out two bottles of white out, and fill them with these liquids. ONE LIQUID IN EACH. DO NOT MIX. Then cap and put them with your stuff. If neccesary to clear a large group of people, dump both bottles on the floor together. The result is Chlorine Gas, a HIGHLY poisonous and extremely DEADLY gas. Be careful with this.

[Uses: distraction, causeing sickness to many, causing evacuation]

So there you have it. Many of these tools can be useful everyday, and some are highly specific, but use what you like. Enjoy.

COMMON "WEAK" EXPLOSIVES

A) Gunpowder:

75% Potassium Nitrate
15% Charcoal
10% Sulfur

The chemicals should be ground into a file powder (separately!) with a morter and pestle. If gunpowder is ignited in the open, it burns fiercely, but if in a closed space it builds up pressure from the released gases and can explode the container. Gunpowder works like this: The potassium nitrate oxidizes the charcoal and sulfur, which then burns fiercely. Carbodioxide and sulfur dioxide are the gases released.

B) Ammonal:

Ammonal is a mixture of ammonium nitrate (a strong oxidizer) with aluminum powder (the 'fuel' in this case). I am not sure of the percentage of composition fo ammonial, so you may want to experiment a little using small amounts.

C) Chemically Ignited Explosives:

Experiment 1:
A mixture of 1 part potassium chlorate to 3 parts table sugar (sucrose) burns fiercely and brightly (similar to the burning of magnesium) when 1 drop of concentrated sulfuric acid is placed on it. What occurs is this: when the acid is added it reacts with the potassium chlorate to form chlorine dioxide, which explodes on formation, burning the sugar as well.

Experiment 2:
Using various chemicals, I have developed a mixture that works very well for imitating volcanic eruptions. I have given it the name 'MPG Volcanite'. Here it is: Potassium chlorate + potassium perchlorate + ammonium nitrate + ammonium dichromate + potassium nitrate + sugar + sulfur + iron filings + charcoal + zinc dust + some coloring agent. (Scarlet = strontium nitrate, Purple = Iodine crystals, Yellow = Sodium chloride, Crimson = Calcium chloride, etc).

Experiment 3:
So, do you think water puts out fires? In this one, it starts it! Mixture: Ammonium nitrate + ammonium chloride + iodine + zinc dust. When a drop or two of water is added, the ammonium nitrate forms nitric acid which reacts with the zinc to produce hydrogen and heat. The heat vaporizes the iodine (giving off purple smoke) and the ammonium chloride (becomes purple when mixed with iodine vapor). It also may ignite the hydrogen and begin burning.

Ammonium nitrate:	8g
Ammonium chloride:	1g
Zinc dust:	8g
Iodine crystals:	1g

Experiment 4:
Potassium permanganate + glycerine when mixed produces a purple-coloured flame in 30 seconds to 1 minute. Works best if the potassium permanganate is finely ground.

Experiment 5:
Calcium carbide + water releases acetylene gas (highly flammable gas used in blow torches).

HOW TO MAKE A 'REAL' PIPE BOMB

This file was written for INFORMATION PURPOSES ONLY, and NOT for illegal use. The writer cannot be held responsible for anything you do to yourself!!!! If there are any spelling or grammatical errors, then FUCK OFF AND DIE cause I don't really care... my point is driven across. Well first of all in order to make a pipe bomb, you must first have a pipe. It doesn't matter how big, or how small, you could use a 1 inch copper pipe, or you could use a 2 foot long drainage pipe.

Once you have this, you will need a few ingredients first. These ingredients make a substance called 'flash powder'. This can be a lot of fun if you make a pile of it about 1/4 lbs. and have your friend light it with a match (some friend). Well, here's what you need:

1> Potassium Chlorate (get it at any chemical store)
2> Powdered Charcoal (not briquets, take some ash from the fire place)
3> Powdered Magnesium (ground up mag. fire starters from camping sections)
4> Sulfur (you know where to get this!)
5> Some kind of piping
6> Hot glue gun, or melted glue
7> Small drill bit and drill
8> Tissue paper (ie. Kleenex)
9> Mist water bottle + sprayer (Windex bottle, etc..)

The magnesium has to be FINE!!! The finer the faster! You can get them in the camping sections of Caldor, and Sears. They look like a block of aluminum on a key chain ($5.00 - $7.00 butthey go a long way!).

Now that you have the stuff, start the work. Find a drill bit about the size of a pencil point, and drill a small hole about dead center of the pipe, only drill thru one side of the pipe, don't drill both sides. Now you should have a piece of pipe, with a small hole drilled into it. After this, take some hot glue (hot glue gun or such). Take a piece of regular paper (not tissue) and stuff it into one end of the pipe, so it plugs up the hole, and is about 2cm into the pipe. Now fill that end with melted glue over the paper, so its about even with the pipe, and sit that down on another piece of paper. Now you should have a pipe with a small hole in the center, and one end with about 2 cm of glue on it, and 2 pieces of paper on either side of the glue.

So far so good... now for the flash powder. Pour in the potassium chlorate (largest amount). Then pour in the charcoal (a little less than the chlorate). Pour this stuff into a grinding plate, not the pipe. Now for the magnesium you filed off the block and ground up finally, make this a bit less than the charcoal amount. Lastly add the sulphur, only a little though, about half as much as the magnesium you just put in. Now grind all the ingredients together until they look like 1 grey dust. Try a little bit (no not the whole damn thing! save that for the fun later!). Light it and see how fast it goes off. Your gonna have to fiddle with it until it turns out the fastest (sounds like something else eh?).

Now that you have the flash powder ready, stick a piece of tape over the small hole you drilled (so nothing spills out). Put the pipe over a sheet of regular paper so you don't loose any of this precious flash powder and start to poor it into the pipe. One the pipe seems full, place a piece of paper over the opening in that end, and pack that piece of paper, and the powder down into the pipe. Take the paper out, and pour more powder in. Keep doing his until its very well packed, and its almost full! Make sure that the flash powder fills above the small hole you drilled! Now put a piece of paper over the powder, and give it one last pack (a small rod, and a hammer will do just fine, but make sure you don't get any sparks!!).
After that, pour in your final glue in the end you just packed, make sure it fills to about 2 cm of glue in that end, over the paper! Stick another piece of paper over that end (just glued) and let it dry, but when drying put it on a flat surface so it hardens flat!

While your waiting for it to dry, take your tissue paper, and lie it down flat on the table, over a piece of cardboard or something if its a good table!! Now mix some water with the flash powder (about 1/2-1/2 mix). No it won't kill the powder. Now shake up the bottle, and spray the tissue paper with the mixture Let it dry, and repeat the sequence. After about 4 shots on 1 side, repeat on the other side (flip the tissue paper). Continue this until your liking. When this is done, and the tissue paper is dry, tear/cut off a small sheet, roll it, and light it.

If you like it, then fine, if not, then keep spraying it. If you like to, before rolling it, pour in some flash powder (not too much!!!) and roll it like a joint. Then twist it. You now have a fuse (really?!?!). Make sure its long!! Now for the final assembly. Take the tape off the small hole you drilled, and poke thru the powder with a pencil point/ice pick or whatever (or the drill bit!).

If you REALLY want to, then put a drop of glue to hold the fuse in better, but you don't have to!! (not too much!). Now make sure the glue has hardened for about 1 hour or so until its rock hard (no ideas!).
You are now the proud owner of a home made PIPE BOMB. Great for parties/special occasions, weddings, Russians, mail boxes and anything else you want to do. When you light this bomb, point the end in the direction you are gonna be running in, and don't throw it (unless your crazy, and in that case, I don't give a shit!) so it doesn't frag in your face!!
If you really want to fancy it up, you can always use threaded steel end caps!!!!!! Well I hope you enjoyed your fun today, and happy bomb making! Be safe (hehehe)

POLISH FLAIRS

Materials:
Potassium nitrate (saltpeter) Sucrose (sugar) Napkin

Procedure:
Mix equal amounts on a napkin and ignite it. It will flare up and smoke. NOTE: Do not inhale the smoke - it is hazardous!

I. LIST OF HOUSEHOLD CHEMICALS AND THEIR COMPOSITION

Household Product	Chemical Compounds
Vinegar	3-5% Acetic Acid
Baking Soda	Sodium Bicarbonate
Drain Cleaners	Sodium Hydroxide
Sani-Flush	75% Sodium Bisulfate
Ammonia Water	Ammonium Hydroxide
Table Salt	Sodium Chloride
Sugar	Sucrose
Malk of Magnesia	Magnesium Hydroxide
Tincture of Iodine	47% Alcohol, 4% Iodine
Rubbing Alcohol	70%-99% Isopropyl Alcohol

II. WIMPY, BUT PRETTY SAFE EXPERIMENTS <phew>

Experiment 1: Generating Chlorine Gas
Ever wonder why ammonia bottles always say "Do not mix with chlorine bleach" and vice versa? That's because if you mix ammonia water with Ajax or something like it, it will give off chlorine gas. To capture it, get a large bottle and put Ajax in the bottom. Then pour some ammonia down into the bottle. Since the chlorine is heavier than air, it will stay down in there unless you use large amounts of either Ajax or Ammonia (DON'T). For something fun do with chlorine, stay tuned.

Experiment 2: Chlorine and Turpentine
Take a small cloth or rag and soak it in turpentine. Quickly drop it into the bottle of chlorine. It should give off alot of black smoke and probably start burning.

Experiment 3: Generating Hydrogen Gas
To generate hydrogen, all you need is an acid and a metal that will react with that acid. Try vinegar (acetic acid) with zinc, aluminum, magnesium, etc. You can collect hydrogen in something if you note that it is lighter than air. Light a small amount and it burns with a small POP.

Another way of creating hydrogen is by the electrolysis of water. This involves separating water (H2O) into hydrogen and oxygen by an electric current. To do this, you need a 6-12 volt battery, two test tubes, a large bowl, two carbon electrodes (take them out of an unworking 6-12 volt battery), and table salt. Dissolve the salt in a large bowl full of water. Submerge the two test tubes in the water and put the electrodes inside them with the mouth of the tube aiming down. Connect the battery to some wire going down to the electrodes. This will work for a while, but chlorine will be generated along with the oxygen which will undoubtedly corrode your copper wires leading to the carbon electrodes (the table salt is broken up into chlorine and sodium ions, the chlorine comes off as a gas with oxygen while sodium reacts with the water to form sodium hydroxide). Therefore, if you can get your hands on some sulfuric acid, use it instead. It will not affect the reaction other than making the water conduct electricity.

Experiment 4: Hydrogen and Chlorine
Take the test tube of hydrogen and cover the mouth with your thumb. Keep it inverted, and bring it near the bottle of chlorine (not one that has reacted with turpentine). Say "goodbye test tube," and drop it into the bottle. The hydrogen and chlorine should react and possible explode (depending on purity and amount of each gas). An interesting thing about this is they will not react if it is dark and no heat or other energy is around. When a light is turned on, enough energy is produced to cause them to react.

Experiment 5: Iodine
Tincture of iodine contains mainly alcogol and a little iodine. To separate them, put the ticture of iodine in a metal lid to a bottle and heat it over a candle. Have a stand holding another metal lid directly over the candle. Have a stand holding another metal lid directly over the tincture (about 4-6 inches above it) with ice on top of it. The alcohol should evaporate, and the iodine should sublime, but should reform iodine crystals on the cold metal lid directly above. You can use the iodine along with household ammonia to form nitrogen triiodide (discussion further up in this document).

Experiment 6: Grain-Elevator Explosion
Want to try your own "grain-elevator explosion?" Get a candle and some flour. Light the candle and put some flour in your hand. Try various ways of getting the flour to leave your hand and become dust right over the candle flame. The enormous surface area allows all the tiny dust particles to burn, which they do at about the same time, combining to form a fireball effect. In grain elevators, much the same thing happens. If you can get your hands on some Lycopodium powder, do. This will work much better, creating huge fireballs that are unexpected.

Nitric acid (HNO3)

There are several ways to make this most essential of all acids for explosives. It is often produced by the oxidation of ammonia per the following formula:

4NH3 + 5O2 4NO + 6H2O; 2NO + O2 2NO2; 3NO2 + H2O 2HNO3 + NO

If the chemist has sodium and potassium nitrate available, they can be used to convert the much less useful sulfuric acid. While this method can be used to produce nitric acid, the process is extremely hazardous, and it should not be carried out unless there is no other way to obtain nitric acid. Do not attempt this on a larger scale without the use of remot manipulation equipment.

Materials

potassium nitrate	ice bath	stirring rod
conc sulfuric acid	distilled water	retort
collecting flask with stopper	retort (300ml)	heat source
sodium nitrate	mortar and pestle	

1) Carefully pour 100 milliliters of concentrated sulfuric acid into the retort.

2) Weigh out exactly 185 grams of sodium nitrate, or 210 grams of potassium nitrate. Crush to a fine powder in a clean, dry mortar and pestle, then slowly add this powder to the retort of sulfuric acid. If all of the powder does not dissolve, carefully stir the solution with a glass rod until the powder is completely dissolved.

3) Place the open end of the retort into the collecting flask, and place the collecting flask in the ice bath.

4) Begin heating the retort, using low heat. Continue heating until liquid begins to come out of the end of the retort. The liquid that forms is nitric acid. Heat until the precipitate in the bottom of the retort is almost dry, or until no more nitric acid forms.

CAUTION
If the acid is heated too strongly, the nitric acid will decompose as soon as it is formed. This can result in the production of highly flammable and toxic gasses that may explode. It is a good idea to set the above apparatus up, and then get away from it.

Sulfuric Acid (H2SO4)

There are two common processes used to make sulfuric acid, unfortunately neither of them is suitable for small scale production outside of a laboratory or industrial plant. The Contact Process utilizes Sulfur Dioxide (SO2), an intensely irritating gas

2SO2 + H2O 2SO3; SO3 + H2O H2SO4

The Chamber Process uses nitric oxide and nitrogen dioxide. On contact with air, nitric oxide forms nitrogen dioxide, a deadly reddish brown gas. The reaction used for production is as follows:

2NO + O2 2NO2; NO2 + SO2 + H2O H2SO4

Sulfuric acid is far too difficult to make outside of a laboratory or industrial plant. However, it is readily available as it is a major component of lead-acid batteries. The sulfuric acid could be poured off from a new battery, or purchased from a battery shop or motorcycle store. If the acid is removed from a battery there will be pieces of lead from the battery which must be removed, either by boiling and filtration. The concentration of the sulfuric acid can also be increased by boiling it or otherwise removing some of the water from the solution. Very pure sulfuric acid pours slightly faster than clean motor oil.

Dry Ice Bombs

(Or: How to recycle empty soda bottles)

Dry ice bombs have been discovered and rediscovered by many different people, and there is no sure way to know who first came up with the idea of putting dry ice (solid carbon dioxide) into an empty plastic soda bottle. There is no standard formula for a dry ice bomb, however a generic form is as follows:

Take a 2-liter soda bottle, empty it completely, then add about 3/4 Lb of dry ice (crushed works best) and (optional) a quantity of water. twist cap on tightly, and get as far away from it as possible.

Depending on the condition of the bottle, the weather, and the amount and temperature of the water added, the bottle may go off anywhere from 30 seconds to 5 minutes from when it was capped. Without any water added, the 2-liter bottles generally take from 3 to 7 minutes if dropped into a warm river, and 45 minutes to 1Ω hours in open air. It is possible for the bottle to reach an extreme pressure without reaching the bursting point, in which case any contact with the bottle would cause it to explode. This effect has resulted in several injuries, and is difficult to reliably reproduce.

The explosion sounds equivalent to an M-100, and usually results in the bottle breaking into several large, sharp pieces of frozen plastic, with the most dangerous projectile being the top section with the screw-on cap. Plastic 16 oz. soda bottles and 1 liter bottles work almost as well as do the 2-liters, however glass bottles aren't nearly as loud, and can produce dangerous shrapnel.

Remember, these are LOUD! Dorian, a classmate of mine, set up 10 bottles in a nearby park without adding water. After the first two went off (there was about 10 minutes between explosions) the Police arrived and spent the next hour trying to find the guy who they thought was setting off M-100's all around them...

Using anything other than plastic to contain dry ice bombs is suicidal. Even plastic 2-liter bottles can produce some nasty shrapnel: One source tells me that he caused an explosion with a 2-liter bottle that destroyed a metal garbage can. Because of the freezing temperatures, the plastic can become very hard and brittle, and when the bottle ruptures it may spray shards of sharp, frozen plastic. While plastic bottles can be dangerous, glass bottles may be deadly. It is rumored that several kids have been killed by shards of glass resulting from the use of a glass bottle.

For some reason, dry ice bombs have become very popular in the state of Utah. As a result, dry ice bombs have been classified as infernal devices, and in utah possession of a completed bomb is a criminal offense. Most other states do not have specific laws on the books outlawing these devices. There are several generic offenses which you could be charged with, including disturbing the peace, reckless endangerment, destruction of property, and construction of a nefarious device.

It is interesting to note that dry ice bombs are not really pyrotechnic devices. As the carbon dioxide sublimes into it's gaseous state, the pressure inside the bottle increases. When the bottle ruptures, the gas is released. This sudden release of pressure causes the temperature of the gases to drop. It is noticed that right after detonation, a cloud of white vapor appears. This may be the water vapor in the surrounding air suddenly condensing when it contacts the freezing cold gas.

Almost any reaction that produces large amounts of gas from a much smaller volume can be used. One common variation is the use of Drano* crystals and shredded aluminum foil. When water is added the Drano, which is mainly lye (an extremely caustic substance), dissolves in the water and reacts with the aluminum, producing heat and hydrogen gas. If the heat
doesn't melt the bottle the pressure will eventually cause it to rupture, spraying caustic liquid and releasing a large quantity of (flammable) hydrogen gas, as well as some water vapor. interesting reaction is adding managanese dioxide to hydrogen peroxide. The manganese dioxide is a catalyst that allows the hydrogen peroxide to release the extra oxygen atom, yielding free oxygen and water:

$$2H_2O_2 + MgO_2 \quad 2H_2O + O_2 + MgO_2$$

It may be possible to combine the drain opener reaction with the hydrogen peroxide reaction, yielding heat, oxygen, and hydrogen. When mixed in the proper proportion these three components can yield a very powerful explosion from the violently exothermic reaction of the hydrogen and oxygen. Preliminary experiments have shown that the drain opener reaction tends to proceed much more quickly than the peroxide reaction, and it often produces
enough excess heat to cause the bottle to rupture prematurely.

Another possible reaction is pool chlorine tablets (usually calcium hypochlorite) and household ammonia. This reaction produces poisonous chlorine gas. Baking soda and vinegar have been tried, but the reaction seems to become inhibited by the rising pressure.

There are also many variations possible when using dry ice. If a bottle that is not dissolved by acetone (such as most 2-L soda bottles) is used, the curshed dry ice can be mixed with acetone. This will greatly speed up the reaction, since unlike water, acetone remains a liquid at very low temperatures. One hazard (benefit?) of adding acetone is that the rupturing bottle will spray cold acetone around in liquid form. This can be very hazardous, since acetone is a very powerful solvent, and is extremely flammable.