The Terrorist's Handbook

DISCLAIMER

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DON'T TRY ANYTHING YOU FIND IN THIS DOCUMENT!!!

Many of the instructions doesn't even work.

Unknown Author
Heavily edited by: Kloey Detect of Five O and B.S. of Hardbodies
Special thanks to WordPerfect Corporation for their spelling checker... This file ***needed it****!*

SPECIAL thanx also goes out to:

Nitro Glycerine, *For providing the files.*
Xpax , *For being patient while the cop was there.*
The Producer , *For getting the files to me....*
The Director , *For getting the files to me....*
Mr.Camaro , *For his* ***BIG*** *EGO.*
The Magician , *For ALL the Bernoulli carts he is gonna send.*

This is a collection of many years worth of effort. This is the original manuscript for a non−published work, from an unknown author. It was originally two LARGE files which had to be merged and then HEAVILY EDITED, mostly the pictures, and then spellchecked. This guy is a chemical genius but he could not spell if his life depended on it. I have simply run a spell check via WordPerfect 4.2, so there are probably more errors which were not picked up, sorry. I hope you have the patience to sit through this file, read it, then correct every little error. It is not like I am submitting it or anything!!!

This file is dedicated To Kathie & KiKi ..... Wherever you both may be .....

1.0 INTRODUCTION

Gunzenbomz Pyro−Technologies, a division of Chaos Industries (CHAOS), is proud to present this first edition of The Terrorist's Handbook. First and foremost, let it be stated that Chaos Industries assumes no responsibilities for any misuse of the information presented in this publication. The purpose of this is to show the many techniques and methods used by those people in this and other countries who employ terror as a means to political and social goals. The techniques herein can be obtained from public libraries, and can usually be carried out by a terrorist with minimal equipment. This makes one all the more frightened, since any lunatic or social deviant could obtain this information, and use it against anyone. The processes and techniques herein ***SHOULD NOT BE CARRIED OUT UNDER ANY CIRCUMSTANCES!!*** serious harm or death could occur from attempting to perform any of the methods in this publication. This is merely for reading enjoyment, and is not intended for actual use!!

Gunzenbomz Pyro−Technologies feels that it is important that everyone has some idea of just how easy it is for a terrorist to perform acts of terror; that is the reason for the existence of this publication.

1.1 Table of Contents

2.0 BUYING EXPLOSIVES AND PROPELLANTS

- BLACK POWDER
- PYRODEX
- ROCKET ENGINE POWDER
- RIFLE/SHOTGUN POWDER
- FLASH POWDER
- AMMONIUM NITRATE

Almost any city or town of reasonable size has a gun store and a pharmacy. These are two of the places that potential terrorists visit in order to purchase explosive material. All that one has to do is know something about the non−explosive uses of the materials. Black powder, for example, is used in blackpowder firearms. It comes in varying "grades", with each different grade being a slightly different size. The grade of black powder depends on what the calibre of the gun that it is used in; a fine grade of powder could burn too fast in the wrong caliber weapon. The rule is: the smaller the grade, the faster the burn rate of the powder.

2.01 BLACK POWDER

Black powder is generally available in three grades. As stated before, the smaller the grade, the faster the powder burns. Burn rate is extremely important in bombs. Since an explosion is a rapid increase of gas volume in a confined environment, to make an explosion, a quick−burning powder is desirable. The three common grades of black powder are listed below, along with the usual bore width (calibre) of what they are used in. Generally, the fastest burning powder, the FFF grade is desirable. However, the other grades and uses are listed below: GRADE BORE WIDTH EXAMPLE OF GUN F .50 or greater model cannon; some rifles FF .36 − .50 large pistols; small rifles FFF .36 or smaller pistols; derringers The FFF grade is the fastest burning, because the smaller grade has more surface area or burning surface exposed to the flame front. The larger grades also have uses which will be discussed later. The price range of black powder, per pound, is about $8.50 − $9.00. The price is not affected by the grade, and so one saves oneself time and work if one buys the finer grade of powder. The major problems with black powder are that it can be ignited accidentally by static electricity, and that it has a tendency to absorb moisture from the air. To safely crush it, a bomber would use a plastic spoon and a wooden salad bowl. Taking a small pile at a time, he or she would apply pressure to the powder through the spoon and rub it in a series of strokes or circles, but not too hard. It is fine enough to use when it is about as fine as flour. The fineness, however, is dependent on what type of device one wishes to make; obviously, it would be impractical to crush enough powder to fill a 1 foot by 4 inch radius pipe. Anyone can purchase black powder, since anyone can own black powder firearms in America.

2.02 PYRODEX

Pyrodex is a synthetic powder that is used like black powder. It comes in the same grades, but it is more expensive per pound. However, a one pound container of pyrodex contains more material by volume than a pound of black powder. It is much easier to crush to a very fine powder than black powder, and it is considerably safer and more reliable. This is because it will not be set off by static electricity, as black can be, and it is less inclined to absorb moisture. It costs about $10.00 per pound. It can be crushed in the same manner as black powder, or it can be dissolved in boiling water and dried.

2.03 ROCKET ENGINE POWDER

One of the most exciting hobbies nowadays is model rocketry. Estes is the largest producer of model rocket kits and engines. Rocket engines are composed of a single large grain of propellant. This grain is surrounded by a fairly heavy cardboard tubing. One gets the propellant by slitting the tube lengthwise, and unwrapping it like a paper towel roll. When this is done, the grey fire clay at either end of the propellant grain must be removed. This is usually done gently with a plastic or brass knife. The material is exceptionally hard, and must be crushed to be used. By gripping the grain on the widest setting on a set of pliers, and putting the grain and powder in a plastic bag, the powder will not break apart and shatter all over. This should be done to all the large chunks of powder, and then it should be crushed like black powder. Rocket engines come in various sizes, ranging from 1/4 A − 2T to the incredibly powerful D engines. The larger the engine, the more expensive. D engines come in packages of three, and cost about $5.00 per package. Rocket engines are perhaps the single most useful item sold in stores to a terrorist, since they can be used as is, or can be cannibalized for their explosive powder.

2.04 RIFLE/SHOTGUN POWDER

Rifle powder and shotgun powder are really the same from a practical standpoint. They are both nitrocellulose based propellants. They will be referred to as gunpowder in all future references. Gunpowder is made by the action of concentrated nitric and sulfuric acid upon cotton. This material is then dissolved by solvents and then reformed in the desired grain size. When dealing with gunpowder, the grain size is not nearly as important as that of black powder. Both large and small grained gunpowder burn fairly slowly compared to black powder when unconfined, but when it is confined, gunpowder burns both hotter and with more gaseous expansion, producing more pressure. Therefore, the grinding process that is often necessary for other propellants is not necessary for gunpowder. Gunpowder costs about $9.00 per pound. Any idiot can buy it, since there are no restrictions on rifles or shotguns in the U.S.

2.05 FLASH POWDER

Flash powder is a mixture of powdered zirconium metal and various oxidizers. It is extremely sensitive to heat or sparks, and should be treated with more care than black powder, with which it should NEVER be mixed. It is sold in small containers which must be mixed and shaken before use. It is very finely powdered, and is available in three speeds: fast, medium, and slow. The fast flash powder is the best for using in explosives or detonators. It burns very rapidly, regardless of confinement or packing, with a hot white "flash", hence its name. It is fairly expensive, costing about $11.00. It is sold in magic shops and theatre supply stores.

2.06 AMMONIUM NITRATE

Ammonium nitrate is a high explosive material that is often used as a commercial "safety explosive" It is very stable, and is difficult to ignite with a match. It will only light if the glowing, red−hot part of a match is touching it. It is also difficult to detonate; (the phenomenon of detonation will be explained later) it requires a large shockwave to cause it to go high explosive. Commercially, it is sometimes mixed with a small amount of nitroglycerine to increase its sensitivity. Ammonium nitrate is used in the "Cold−Paks" or "Instant Cold", available in most drug stores. The "Cold Paks" consist of a bag of water, surrounded by a second plastic bag containing the ammonium nitrate. To get the ammonium nitrate, simply cut off the top of the outside bag, remove the plastic bag of water, and save the ammonium nitrate in a well sealed, airtight container, since it is rather hydroscopic, i.e. it tends to absorb water from the air. It is also the main ingredient in many fertilizers.

−−>Index<−−Acquiring chemicals−−>

2.1 ACQUIRING CHEMICALS

- TECHNIQUES FOR PICKING LOCKS

The first section deals with getting chemicals legally. This section deals with "procuring" them. The best place to steal chemicals is a college. Many state schools have all of their chemicals out on the shelves in the labs, and more in their chemical stockrooms. Evening is the best time to enter lab buildings, as there are the least number of people in the buildings, and most of the labs will still be unlocked. One simply takes a bookbag, wears a dress shirt and jeans, and tries to resemble a college freshman. If anyone asks what such a person is doing, the thief can simply say that he is looking for the polymer chemistry lab, or some other chemistry−related department other than the one they are in. One can usually find out where the various labs and departments in a building are by calling the university. There are, of course other techniques for getting into labs after hours, such as placing a piece of cardboard in the latch of an unused door, such as a back exit. Then, all one needs to do is come back at a later hour. Also, before this is done, terrorists check for security systems. If one just walks into a lab, even if there is someone there, and walks out the back exit, and slip the cardboard in the latch before the door closes, the person in the lab will never know what happened. It is also a good idea to observe the building that one plans to rob at the time that one plans to rob it several days before the actual theft is done. This is advisable since the would−be thief should know when and if the campus security makes patrols through buildings. Of course, if none of these methods are successful, there is always section 2.11, but as a rule, college campus security is pretty poor, and nobody suspects another person in the building of doing anything wrong, even if they are there at an odd hour.

2.11 TECHNIQUES FOR PICKING LOCKS

See also the MIT guide to Lockpicking.

If it becomes necessary to pick a lock to enter a lab, the world's most effective lockpick is dynamite, followed by a sledgehammer. There are unfortunately, problems with noise and excess structural damage with these methods. The next best thing, however, is a set of army issue lockpicks.

These, unfortunately, are difficult to acquire. If the door to a lab is locked, but the deadbolt is not engaged, then there are other possibilities. The rule here is: if one can see the latch, one can open the door. There are several devices which facilitate freeing the latch from its hole in the wall. Dental tools, stiff wire (20 gauge), specially bent aluminum from cans, thin pocket− knives, and credit cards are the tools of the trade. The way that all these tools and devices are uses is similar: pull, push, or otherwise move the latch out of its hole in the wall, and pull the door open. This is done by sliding whatever tool that you are using behind the latch, and pulling the latch out from the wall. To make an aluminum−can lockpick, terrorists can use an aluminum can and carefully cut off the can top and bottom. Cut off the cans' ragged ends. Then, cut the open−ended cylinder so that it can be flattened out into a single long rectangle. This should then be cut into inch wide strips. Fold the strips in 1/4 inch increments (1). One will have a long quadruple−thick 1/4 inch wide strip of aluminum. This should be folded into an L−shape, a J−shape, or a U−shape. This is done by folding. The pieces would look like this:

```
        ________________________________________________________    v
1/4     |_______________________________________________________|   |
1/4     |_______________________________________________________|   | 1 inch
1/4     |_______________________________________________________|   |
1/4     |_______________________________________________________|   |
                                                                    ^
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Fold along lines to make a single quadruple−thick piece of aluminum. This should then be folded to produce an L,J,or U shaped device that looks like this:

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  __________________________________________
 / ________________________________________|
| |
| |          L-shaped
| |
| |
|_|
  _____________________________
 / ___________________________|
| |
| |     J-shaped
| |
| |________
 \________|
  _____________________
 / ___________________|
| |
| |
| |     U-shaped
| |
| |____________________
 \____________________|
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All of these devices should be used to hook the latch of a door and pull the latch out of its hole. The folds in the lockpicks will be between the door and the wall, and so the device will not unfold, if it is made properly.

<−−Buying explosives**−−>Index<−−**Chemicals availability−−>

2.2 LIST OF USEFUL HOUSEHOLD CHEMICALS AND THEIR AVAILABILITY

Anyone can get many chemicals from hardware stores, supermarkets, and drug stores to get the materials to make explosives or other dangerous compounds. A would−be terrorist would merely need a station wagon and some money to acquire many of the chemicals named here.

Chemical	Used In	Available at
alcohol, ethyl *	alcoholic beverages solvents (95% min. for both)	liquor stores hardware stores
ammonia +	CLEAR household ammonia	supermarkets/7−eleven
ammonium nitrate	instant−cold paks, fertilizers	drug stores, medical supply stores
nitrous oxide	pressurizing whip cream	party supply stores
magnesium	firestarters	surplus/camping stores
lecithin	vitamins	pharmacies/drug stores
mineral oil	cooking, laxative	supermarket/drug stores
mercury @	mercury thermometers	supermarkets/hardware stores
sulfuric acid	uncharged car batteries	automotive stores
glycerine	?	pharmacies/drug stores
sulfur	gardening	gardening/hardware store
charcoal	charcoal grills	supermarkets/gardening stores
sodium nitrate	fertilizer	gardening store
cellulose (cotton)	first aid	drug/medical supply stores
strontium nitrate	road flares	surplus/auto stores,
fuel oil	kerosene stoves	surplus/camping stores,
bottled gas	propane stoves	surplus/camping stores,
potassium permanganate	water purification	purification plants
hexamine or methenamine	hexamine stoves (camping)	surplus/camping stores
nitric acid ^	cleaning printing plates	printing shops photography stores
iodine &	first aid	drug stores
sodium perchlorate	solidox pellets for cutting torches	hardware stores

notes:

- ethyl alcohol is mixed with methyl alcohol when it is used as a solvent. Methyl alcohol is very poisonous. Solvent alcohol must be at least 95% ethyl alcohol if it is used to make mercury fulminate. Methyl alcohol may prevent mercury fulminate from forming.
- Ammonia, when bought in stores comes in a variety of forms. The pine and cloudy ammonias should not be bought; only the clear ammonia should be used to make ammonium triiodide crystals.
- Mercury thermometers are becoming a rarity, unfortunately. They may be hard to find in most stores. Mercury is also used in mercury switches, which are available at electronics stores. Mercury is a hazardous substance, and should be kept in the thermometer or mercury switch until used. It gives off mercury vapors which will cause brain damage if inhaled. For this reason, it is a good idea not to spill mercury, and to always use it outdoors. Also, do not get it in an open cut; rubber gloves will help prevent this.
- Nitric acid is very difficult to find nowadays. It is usually stolen by bomb makers, or made by the process described in a later section. A desired concentration for making explosives about 70%.
- The iodine sold in drug stores is usually not the pure crystalline form that is desired for producing ammonium triiodide crystals. To obtain the pure form, it must usually be acquired by a doctor's prescription, but this can be expensive. Once again, theft is the means that terrorists result to.

<−−Acquiring chemicals**−−>Index<−−**Preparation of chemicals−−>

2.3 PREPARATION OF CHEMICALS

- NITRIC ACID
- SULFURIC ACID
- AMMONIUM NITRATE

2.31 NITRIC ACID

There are several ways to make this most essential of all acids for explosives. One method by which it could be made will be presented. Once again, be reminded that these methods SHOULD NOT BE CARRIED OUT!!

Materials:

- sodium nitrate or potassium nitrate
- distilled water
- concentrated sulfuric acid

Equipment:

- adjustable heat source
- retort
- ice bath
- stirring rod
- collecting flask with stopper

Procedure:

1. Pour 32 milliliters of concentrated sulfuric acid into the retort.
2. Carefully weigh out 58 grams of sodium nitrate, or 68 grams of potassium nitrate. and add this to the acid slowly. If it all does not dissolve, carefully stir the solution with a glass rod until it does.
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 is forming. CAUTION: If the acid is headed too strongly, the nitric acid will decompose as soon as it is formed. This can result in the production of highly flammable and toxic gases that may explode. It is a good idea to set the above apparatus up, and then get away from it.

Potassium nitrate could also be obtained from store−bought black powder, simply by dissolving black powder in boiling water and filtering out the sulfur and charcoal. To obtain 68 g of potassium nitrate, it would be necessary to dissolve about 90 g of black powder in about one litre of boiling water. Filter the dissolved solution through filter paper in a funnel into a jar until the liquid that pours through is clear. The charcoal and sulfur in black powder are insoluble in water, and so when the solution of water is allowed to evaporate, potassium nitrate will be left in the jar.

2.32 SULFURIC ACID

Sulfuric acid is far too difficult to make outside of a laboratory or industrial plant. However, it is readily available in an uncharged car battery. A person wishing to make sulfuric acid would simply remove the top of a car battery and pour the acid into a glass container. There would probably be pieces of lead from the battery in the acid which would have to be removed, either by boiling or filtration. The concentration of the sulfuric acid can also be increased by boiling it; very pure sulfuric acid pours slightly faster than clean motor oil.

2.33 AMMONIUM NITRATE

Ammonium nitrate is a very powerful but insensitive high−order explosive. It could be made very easily by pouring nitric acid into a large flask in an ice bath. Then, by simply pouring household ammonia into the flask and running away, ammonium nitrate would be formed. After the materials have stopped reacting, one would simply have to leave the solution in a warm place until all of the water and any unneutralized ammonia or acid have evaporated. There would be a fine powder formed, which would be ammonium nitrate. It must be kept in an airtight container, because of its tendency to pick up water from the air. The crystals formed in the above process would have to be heated VERY gently to drive off the remaining water.

<−−Chemicals availability**−−>Index<−−**Explosive recipes−−>

3.0 EXPLOSIVE RECIPES

3.01 EXPLOSIVE THEORY. Once again, persons reading this material MUST NEVER ATTEMPT TO PRODUCE ANY OF THE EXPLOSIVES DESCRIBED HEREIN. IT IS ILLEGAL AND EXTREMELY DANGEROUS TO ATTEMPT TO DO SO. LOSS OF LIFE AND/OR LIMB COULD EASILY OCCUR AS A RESULT OF ATTEMPTING TO PRODUCE EXPLOSIVE MATERIALS.

These recipes are theoretically correct, meaning that an individual could conceivably produce the materials described. The methods here are usually scaled−down industrial procedures.

3.01 EXPLOSIVE THEORY

An explosive is any material that, when ignited by heat or shock, undergoes rapid decomposition or oxidation. This process releases energy that is stored in the material in the form of heat and light, or by breaking down into gaseous compounds that occupy a much larger volume that the original piece of material. Because this expansion is very rapid, large volumes of air are displaced by the expanding gases. This expansion occurs at a speed greater than the speed of sound, and so a sonic boom occurs. This explains the mechanics behind an explosion. Explosives occur in several forms: high−order explosives which detonate, low order explosives, which burn, and primers, which may do both.

High order explosives detonate. A detonation occurs only in a high order explosive. Detonations are usually incurred by a shockwave that passes through a block of the high explosive material. The shockwave breaks apart the molecular bonds between the atoms of the substance, at a rate approximately equal to the speed of sound traveling through that material. In a high explosive, the fuel and oxidizer are chemically bonded, and the shockwave breaks apart these bonds, and re−combines the two materials to produce mostly gases. T.N.T., ammonium nitrate, and R.D.X. are examples of high order explosives.

Low order explosives do not detonate; they burn, or undergo oxidation. when heated, the fuel(s) and oxidizer(s) combine to produce heat, light, and gaseous products. Some low order materials burn at about the same speed under pressure as they do in the open, such as blackpowder. Others, such as gunpowder, which is correctly called nitrocellulose, burn much faster and hotter when they are in a confined space, such as the barrel of a firearm; they usually burn much slower than blackpowder when they are ignited in unpressurized conditions. Black powder, nitrocellulose, and flash powder are good examples of low order explosives.

Primers are peculiarities to the explosive field. Some of them, such as mercury fulminate, will function as a low or high order explosive. They are usually more sensitive to friction, heat, or shock, than the high or low explosives. Most primers perform like a high order explosive, except that they are much more sensitive. Still others merely burn, but when they are confined, they burn at a great rate and with a large expansion of gases and a shockwave. Primers are usually used in a small amount to initiate, or cause to decompose, a high order explosive, as in an artillery shell. But, they are also frequently used to ignite a low order explosive; the gunpowder in a bullet is ignited by the detonation of its primer.

<−−Preparation of chemicals**−−>Index<−−**Impact explosives−−>

3.1 IMPACT EXPLOSIVES

- AMMONIUM TRIIODIDE CRYSTALS
- MERCURY FULMINATE
- NITROGLYCERINE
- PICRATES

Impact explosives are often used as primers. Of the ones discussed here, only mercury fulminate and nitroglycerine are real explosives; Ammonium triiodide crystals decompose upon impact, but they release little heat and no light. Impact explosives are always treated with the greatest care, and even the stupidest anarchist never stores them near any high or low explosives.

3.11 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

- iodine crystals
- clear ammonia
- (ammonium hydroxide,
- two throw−away glass jars for the suicidal)

Equipment

- funnel and filter paper
- paper towels

Procedure

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.

3.12 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

- mercury (5 g)
- concentrated nitric acid (35 ml)
- ethyl alcohol (30 ml)
- distilled water

Equipment

- glass stirring rod
- 100 ml beaker (2)
- adjustable heat source
- blue litmus paper
- funnel and filter paper

Procedure

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.

3.13 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. When Nobel's factories make it, many people were killed by the all−to−frequent factory explosions. Usually, as soon as it is made, it is converted into a safer substance, such as dynamite.

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.

3.14 PICRATES

Although the procedure for the production of picric acid, or trinitrophenol has not yet been given, its salts are described first, since they are extremely sensitive, and detonate on impact. By mixing picric acid with metal hydroxides, such as sodium or potassium hydroxide, and evaporating the water, metal picrates can be formed. Simply obtain picric acid, or produce it, and mix it with a solution of (preferably) potassium hydroxide, of a mid range molarity. (about 6−9 M) This material, potassium picrate, is impact−sensitive, and can be used as an initiator for any type of high explosive.

<−−Explosive recipes**−−>Index<−−**Low order explosives−−>

3.2 LOW−ORDER EXPLOSIVES

- BLACK POWDER
- NITROCELLULOSE
- FUEL−OXIDIZER MIXTURES
- PERCHLORATES

There are many low−order explosives that can be purchased in gun stores and used in explosive devices. However, it is possible that a wise wise store owner would not sell these substances to a suspicious−looking individual. Such an individual would then be forced to resort to making his own low−order explosives.

3.21 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 gases 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

- potassium nitrate (75 g) or
- sodium nitrate (75 g)
- sulfur (10 g)
- charcoal (15 g)
- distilled water

Equipment

- clay grinding bowl and clay grinder (potassium) or
- wooden salad bowl and wooden spoon (sodium)
- plastic bags (3)
- 300−500 ml beaker (1)
- coffee pot or heat source

Procedure

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. Plastic 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.

3.22 NITROCELLULOSE

Nitrocellulose is usually called "gunpowder" or "guncotton". It is more stable than black powder, and it produces a much greater volume of hot gas. It also burns much faster than black powder when it is in a confined space. Finally, nitrocellulose is fairly easy to make, as outlined by the following procedure:

Materials

- cotton (cellulose)
- concentrated nitric acid
- concentrated sulfuric acid
- distilled water

Equipment

- two (2) 200−300 ml beakers
- funnel and filter paper
- blue litmus paper

Procedure

1. Pour 10 cc of concentrated sulfuric acid into the beaker. Add to this 10 cc of concentrated nitric acid.
2. Immediately add 0.5 gm of cotton, and allow it to soak for exactly 3 minutes.
3. Remove the nitrocotton, and transfer it to a beaker of distilled water to wash it in.
4. Allow the material to dry, and then re−wash it.
5. After the cotton is neutral when tested with litmus paper, it is ready to be dried and stored.

3.23 FUEL−OXIDIZER MIXTURES

There are nearly an infinite number of fuel−oxidizer mixtures that can be produced by a misguided individual in his own home. Some are very effective and dangerous, while others are safer and less effective. A list of working fuel−oxidizer mixtures will be presented, but the exact measurements of each compound are debatable for maximum effectiveness. A rough estimate will be given of the percentages of each fuel and oxidizer:

oxidizer, % by weight	fuel, % by weight	speed #	notes
potassium chlorate 67%	sulfur 33%	5	friction/impact sensitive; unstable
potassium chlorate 50%	sugar 35% charcoal 15%	5	fairly slow burning; unstable
potassium chlorate 50%	sulfur 25% magnesium or aluminum dust 25%	8	extremely unstable!
potassium chlorate 67%	magnesium or aluminum dust 33%	8	unstable

sodium nitrate 65%	magnesium dust 30% sulfur 5%	?	unpredictable burn rate
potassium permanganate 60% WARNING: IGNITES SPONTANEOUSLY WITH GLYCERINE!!!	glycerine 40%	4	delay before ignition depends upon grain size
potassium permanganate 67%	sulfur 33%	5	unstable
potassium permangenate 60%	sulfur 20% magnesium or aluminum dust 20%	5	unstable
potassium permanganate 50%	sugar 50%	3	?
potassium nitrate 75%	charcoal 15% sulfur 10%	7	this is black powder!
potassium nitrate 60%	powdered iron or magnesium 40%	1	burns very hot
potassium chlorate 75%	phosphorus sesquisulfide 25%	8	used to make strike−anywhere matches
ammonium perchlorate 70%	aluminum dust 30% and small amount of iron oxide	6	solid fuel for space shuttle
potassium perchlorate 67% (sodium perchlorate)	magnesium or aluminum dust 33%	10	flash powder
potassium perchlorate 60% (sodium perchlorate)	magnesium or aluminum dust 20% sulfur 20%	8	alternate flash powder
barium nitrate 30% potassium perchlorate 30%	aluminum dust 30%	9	alternate flash powder
barium peroxide 90%	magnesium dust 5% aluminum dust 5%	10	alternate flash powder
potassium perchlorate 50%	sulfur 25% magnesium or aluminum dust 25%	8	slightly unstable
potassium chlorate 67% calcium carbonate 3%	red phosphorus 27% sulfur 3%	7	very unstable impact sensitive
potassium permanganate 50%	powdered sugar 25% aluminum or magnesium dust 25%	7	unstable; ignites if it gets wet!
potassium chlorate 75%	charcoal dust 15% sulfur 10%	6	unstable

NOTE: Mixtures that uses substitutions of sodium perchlorate for potassium perchlorate become moisture−absorbent and less stable.

The higher the speed number, the faster the fuel−oxidizer mixture burns AFTER ignition. Also, as a rule, the finer the powder, the faster the rate of burning.

As one can easily see, there is a wide variety of fuel−oxidizer mixtures that can be made at home. By altering the amounts of fuel and oxidizer(s), different burn rates can be achieved, but this also can change the sensitivity of the mixture.

3.24 PERCHLORATES

As a rule, any oxidizable material that is treated with perchloric acid will become a low order explosive. Metals, however, such as potassium or sodium, become excellent bases for flash−type powders. Some materials that can be perchlorated are cotton, paper, and sawdust. To produce potassium or sodium perchlorate, simply acquire the hydroxide of that metal, e.g. sodium or potassium hydroxide. It is a good idea to test the material to be perchlorated with a very small amount of acid, since some of the materials tend to react explosively when contacted by the acid. Solutions of sodium or potassium hydroxide are ideal.

<−−Impact explosives**−−>Index<−−**High order explosives−−>

3.3 HIGH−ORDER EXPLOSIVES

- R.D.X.
- AMMONIUM NITRATE
- ANFOS
- T.N.T.
- POTASSIUM CHLORATE
- DYNAMITE
- NITROSTARCH EXPLOSIVES
- PICRIC ACID
- AMMONIUM PICRATE
- NITROGEN TRICHLORIDE
- LEAD AZIDE

High order explosives can be made in the home without too much difficulty. The main problem is acquiring the nitric acid to produce the high explosive. Most high explosives detonate because their molecular structure is made up of some fuel and usually three or more NO2 (nitrogen dioxide) molecules. T.N.T., or Tri−Nitro−Toluene is an excellent example of such a material. When a shock wave passes through an molecule of T.N.T., the nitrogen dioxide bond is broken, and the oxygen combines with the fuel, all in a matter of microseconds. This accounts for the great power of nitrogen−based explosives. Remembering that these procedures are NEVER TO BE CARRIED OUT, several methods of manufacturing high−order explosives in the home are listed.

3.31 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

Procedure

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. Sodium 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.

3.32 AMMONIUM NITRATE

Ammonium nitrate could be made by a terrorist according to the hap− hazard method in section 2.33, or it could be stolen from a construction site, since it is usually used in blasting, because it is very stable and insensitive to shock and heat. A terrorist could also buy several Instant Cold−Paks from a drug store or medical supply store. The major disadvantage with ammonium nitrate, from a terrorist's point of view, would be detonating it. A rather powerful priming charge must be used, and usually with a booster charge. The diagram below will explain.

```
         _________________________________________
        |          |                              |
    ____|__        |                              |
   |       | T.N.T.|     ammonium nitrate         |
   |primer |booster|                              |
   |_______|       |                              |
        |          |                              |
        |__________|______________________________|
```

The primer explodes, detonating the T.N.T., which detonates, sending a tremendous shockwave through the ammonium nitrate, detonating it.

3.33 ANFOS

ANFO is an acronym for Ammonium Nitrate − Fuel Oil Solution. An ANFO solves the only other major problem with ammonium nitrate: its tendency to pick up water vapor from the air. This results in the explosive failing to detonate when such an attempt is made. This is rectified by mixing 94% (by weight) ammonium nitrate with 6% fuel oil, or kerosene. The kerosene keeps the ammonium nitrate from absorbing moisture from the air. An ANFO also requires a large shockwave to set it off.

3.34 T.N.T.

T.N.T., or Tri−Nitro−Toluene, is perhaps the second oldest known high explosive. Dynamite, of course, was the first. It is certainly the best known high explosive, since it has been popularized by early morning cartoons. It is the standard for comparing other explosives to, since it is the most well known. In industry, a T.N.T. is made by a three step nitration process that is designed to conserve the nitric and sulfuric acids which are used to make the product. A terrorist, however, would probably opt for the less economical one step method. The one step process is performed by treating toluene with very strong (fuming) sulfuric acid. Then, the sulfated toluene is treated with very strong (fuming) nitric acid in an ice bath. Cold water is added the solution, and it is filtered.

3.35 POTASSIUM CHLORATE

Potassium chlorate itself cannot be made in the home, but it can be obtained from labs. If potassium chlorate is mixed with a small amount of vaseline, or other petroleum jelly, and a shockwave is passed through it, the material will detonate with slightly more power than black powder. It must, however, be confined to detonate it in this manner. The procedure for making such an explosive is outlined below:

Materials

- potassium chlorate (9 parts, by volume)
- petroleum jelly (vaseline) (1 part, by volume)

Equipment

- zip−lock plastic bag
- clay grinding bowl or wooden bowl and wooden spoon

Procedure

1. Grind the potassium chlorate in the grinding bowl carefully and slowly, until the potassium chlorate is a very fine powder. The finer that it is powdered, the faster (better) it will detonate.
2. Place the powder into the plastic bag. Put the petroleum jelly into the plastic bag, getting as little on the sides of the bag as possible, i.e. put the vaseline on the potassium chlorate powder.
3. Close the bag, and kneed the materials together until none of the potassium chlorate is dry powder that does not stick to the main glob. If necessary, add a bit more petroleum jelly to the bag.
4. The material must me used within 24 hours, or the mixture will react to greatly reduce the effectiveness of the explosive. This reaction, however, is harmless, and releases no heat or dangerous products.

3.36 DYNAMITE

The name dynamite comes from the Greek word "dynamis", meaning power. Dynamite was invented by Nobel shortly after he made nitroglycerine. It was made because nitroglycerine was so dangerously sensitive to shock. A misguided individual with some sanity would, after making nitroglycerine (an insane act) would immediately convert it to dynamite. This can be done by adding various materials to the nitroglycerine, such as sawdust. The sawdust holds a large weight of nitroglycerine per volume. Other materials, such as ammonium nitrate could be added, and they would tend to desensitize the explosive, and increase the power. But even these nitroglycerine compounds are not really safe.

3.37 NITROSTARCH EXPLOSIVES

Nitrostarch explosives are simple to make, and are fairly powerful. All that need be done is treat various starches with a mixture of concentrated nitric and sulfuric acids. 10 ml of concentrated sulfuric acid is added to 10 ml of concentrated nitric acid. To this mixture is added 0.5 grams of starch. Cold water is added, and the apparently unchanged nitrostarch is filtered out. Nitrostarch explosives are of slightly lower power than T.N.T., but they are more readily detonated.

3.38 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

Procedure

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.

3.39 AMMONIUM PICRATE

Ammonium picrate, also called Explosive D, is another safety explosive. It requires a substantial shock to cause it to detonate, slightly less than that required to detonate ammonium nitrate. It is much safer than picric acid, since it has little tendency to form hazardous unstable salts when placed in metal containers. It is simple to make from picric acid and clear household ammonia. All that need be done is put the picric acid crystals into a glass container and dissolve them in a great quantity of hot water. Add clear household ammonia in excess, and allow the excess ammonia to evaporate. The powder remaining should be ammonium picrate.

3.40 NITROGEN TRICHLORIDE

Nitrogen trichloride, also known as chloride of azode, is an oily yellow liquid. It explodes violently when it is heated above 60 degrees Celsius, or when it comes in contact with an open flame or spark. It is fairly simple to produce.

Materials

- ammonium nitrate
- hydrochloric acid
- potassium permanganate

Equipment

- 2 beakers
- large flask with stopper and glass pipe
- adjustable heat source

Procedure

1. In a beaker, dissolve about 5 teaspoons of ammonium nitrate in water. Do not put so much ammonium nitrate into the solution that some of it remains undissolved in the bottom of the beaker.

2. Collect a quantity of chlorine gas in a second beaker by mixing hydrochloric acid with potassium permanganate in a large flask with a stopper and glass pipe.
3. Place the beaker containing the chlorine gas upside down on top of the beaker containing the ammonium nitrate solution, and tape the beakers together. Gently heat the bottom beaker. When this is done, oily yellow droplets will begin to form on the surface of the solution, and sink down to the bottom. At this time, remove the heat source immediately. Alternately, the chlorine can be bubbled through the ammonium nitrate solution, rather than collecting the gas in a beaker, but this requires timing and a stand to hold the beaker and test tube. The chlorine gas can also be mixed with anhydrous ammonia gas, by gently heating a flask filled with clear household ammonia. Place the glass tubes from the chlorine−generating flask and the tube from the ammonia−generating flask in another flask that contains water.
4. Collect the yellow droplets with an eyedropper, and use them immediately, since nitrogen trichloride decomposes in 24 hours.

3.41 LEAD AZIDE

Lead Azide is a material that is often used as a booster charge for other explosive, but it does well enough on its own as a fairly sensitive explosive. It does not detonate too easily by percussion or impact, but it is easily detonated by heat from an igniter wire, or a blasting cap. It is simple to produce, assuming that the necessary chemicals can be procured. By dissolving sodium azide and lead acetate in water in separate beakers, the two materials are put into an aqueous state. Mix the two beakers together, and apply a gentle heat. Add an excess of the lead acetate solution, until no reaction occurs, and the precipitate on the bottom of the beaker stops forming. Filter off the solution, and wash the precipitate in hot water. The precipitate is lead azide, and it must be stored wet for safety. If lead acetate cannot be found, simply acquire acetic acid, and put lead metal in it. Black powder bullets work well for this purpose.

<−−Low order explosives**−−>Index<−−**Other 'explosives'−−>

3.5 OTHER "EXPLOSIVES"

- THERMIT
- MOLOTOV COCKTAILS
- CHEMICAL FIRE BOTTLE
- BOTTLED GAS EXPLOSIVES

The remaining section covers the other types of materials that can be used to destroy property by fire. Although none of the materials presented here are explosives, they still produce explosive−style results.

3.51 THERMIT

Thermit (a.k.a. Thermite) is a fuel−oxidizer mixture that is used to generate tremendous amounts of heat. It was not presented in section 3.23 because it does not react nearly as readily. It is a mixture of iron oxide and aluminum, both finely powdered. When it is ignited, the aluminum burns, and extracts the oxygen from the iron oxide. This is really two very exothermic reactions that produce a combined temperature of about 2200 degrees C. This is half the heat produced by an atomic weapon. It is difficult to ignite, however, but when it is ignited, it is one of the most effective firestarters around.

Materials

- powdered aluminum (10 g)
- powdered iron oxide (10 g)

Procedure

1. Simply mix the two powders together and try to make the mixture as homogeneous as possible. The ratio of iron oxide to aluminum is 50% / 50% by weight, and can be made in greater or lesser amounts.
2. Ignition of thermite can be accomplished by adding a small amount of potassium chlorate to the thermit, and pouring a few drops of sulfuric acid on it. This method and others will be discussed later in section 4.33. The other method of igniting thermit is with a magnesium strip. Finally, by using common sparkler−type fireworks placed in the thermit, the mixture can be ignited.

3.52 MOLOTOV COCKTAILS

First used by Russians against German tanks, the Molotov cocktail is now exclusively used by terrorists worldwide. They are extremely simple to make, and can produce devastating results. By taking any highly flammable material, such as gasoline, diesel fuel, kerosene, ethyl or methyl alcohol, lighter fluid, turpentine, or any mixture of the above, and putting it into a large glass bottle, anyone can make an effective firebomb. After putting the flammable liquid in the bottle, simply put a piece of cloth that is soaked in the liquid in the top of the bottle so that it fits tightly. Then, wrap some of the cloth around the neck and tie it, but be sure to leave a few inches of lose cloth to light. Light the exposed cloth, and throw the bottle. If the burning cloth does not go out, and if the bottle breaks on impact, the contents of the bottle will spatter over a large area near the site of impact, and burst into flame. Flammable mixtures such as kerosene and motor oil should be mixed with a more volatile and flammable liquid, such as gasoline, to insure ignition. A mixture such as tar or grease and gasoline will stick to the surface that it strikes, and burn hotter, and be more difficult to extinguish. A mixture such as this must be shaken well before it is lit and thrown

3.53 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

- potassium chlorate (2 teaspoons)
- sugar (2 teaspoons)
- concentrated sulfuric acid (4 oz.)
- gasoline (8 oz.)

Equipment

- glass bottle (12 oz.)
- cap for bottle, with plastic inside
- glass or plastic cup and spoon
- cooking pan with raised edges
- paper towels

Procedure

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.

3.54 BOTTLED GAS EXPLOSIVES

Bottled gas, such as butane for refilling lighters, propane for propane stoves or for bunsen burners, can be used to produce a powerful explosion. To make such a device, all that a simple−minded anarchist would have to do would be to take his container of bottled gas and place it above a can of Sterno or other gelatinized fuel, and light the fuel and run. Depending on the fuel used, and on the thickness of the fuel container, the liquid gas will boil and expand to the point of bursting the container in about five minutes. In theory, the gas would immediately be ignited by the burning gelatinized fuel, producing a large fireball and explosion. Unfortunately, the bursting of the bottled gas container often puts out the fuel, thus preventing the expanding gas from igniting. By using a metal bucket half filled with gasoline, however, the chances of ignition are better, since the gasoline is less likely to be extinguished. Placing the canister of bottled gas on a bed of burning charcoal soaked in gasoline would probably be the most effective way of securing ignition of the expanding gas, since although the bursting of the gas container may blow out the flame of the gasoline, the burning charcoal should immediately re−ignite it. Nitrous oxide, hydrogen, propane, acetylene, or any other flammable gas will do nicely.

<−−High order explosives**−−>Index<−−**Using explosives−−>

4.0 USING EXPLOSIVES

Once a terrorist has made his explosives, the next logical step is to apply them. Explosives have a wide range of uses, from harassment, to vandalism, to murder. NONE OF THE IDEAS PRESENTED HERE ARE EVER TO BE CARRIED OUT, EITHER IN PART OR IN FULL! DOING SO CAN LEAD TO PROSECUTION, FINES, AND IMPRISONMENT!

The first step that a person that would use explosive would take would be to determine how big an explosive device would be needed to do whatever had to be done. Then, he would have to decide what to make his bomb with. He would also have to decide on how he wanted to detonate the device, and determine where the best placement for it would be. Then, it would be necessary to see if the device could be put where he wanted it without it being discovered or moved. Finally, he would actually have to sit down and build his explosive device. These are some of the topics covered in the next section.

<−−Other 'explosives'**−−>Index<−−**Safety−−>

4.1 SAFETY

There is no such thing as a "safe" explosive device. One can only speak in terms of relative safety, or less unsafe.

Remember what the pyromaniac said after detonating his first creation: *"Look ma', No hands!"*

<−−Using explosives**−−>Index<−−**Ignition devices−−>

4.2 IGNITION DEVICES

- FUSE IGNITION
- IMPACT IGNITION
- ELECTRICAL IGNITION
- ELECTRO−MECHANICAL IGNITION
    - ♦ Mercury Switches
    - ♦ Tripwire Switches
    - ♦ Radio Control Detonators

There are many ways to ignite explosive devices. There is the classic "light the fuse, throw the bomb, and run" approach, and there are sensitive mercury switches, and many things in between. Generally, electrical detonation systems are safer than fuses, but there are times when fuses are more appropriate than electrical systems; it is difficult to carry an electrical detonation system into a stadium, for instance, without being caught. A device with a fuse or impact detonating fuse would be easier to hide.

4.21 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 impractical. 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

Procedure

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
   ----------  = 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
------------------ = 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.

```
_____________________
\                   /
 \                 /  ------ match book cover
  \               /
   |    M|f|M ---|------- match head
   |    A|u|A    |
   |    T|s|T    |
   |    C|e|C    |
   |tapeH|.|Htape|
   |     |f|     |
   |#####|u|#####|-------- striking paper
   |#####|s|#####|
   \     |e|     /
    \    |.|    /
     \   |f|   /
      \  |u|  /
       |ta|s|pe|
       |ta|e|pe|
          |.|
          |f|
          |u|
          |s|
          |e|
          |.|
          |_|
```

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 the match−heads 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 match−heads will light the fuse, since it adjacent to the burning match heads.

4.22 IMPACT IGNITION

Impact ignition is an excellent method of ignition for spontaneous terrorist activities. The problem with an impact−detonating device is that it must be kept in a very safe container so that it will not explode while being transported to the place where it is to be used. This can be done by having a removable impact initiator.

The best and most reliable impact initiator is one that uses factory made initiators or primers. A no. 11 cap for black powder firearms is one such primer. They usually come in boxes of 100, and cost about $2.50. To use such a cap, however, one needs a nipple that it will fit on. Black powder nipples are also available in gun stores. All that a person has to do is ask for a package of nipples and the caps that fit them. Nipples have a hole that goes all the way through them, and they have a threaded end, and an end to put the cap on. A cut−away of a nipple is shown below:

```
                    ________________
                   |                |
                   _                |
                  | |                 |
           _______| |^^^^^^^^|        |
           |      ___________|          |
           |     |                      |
   no. 11        |_______|                |
   percussion     _______                 | ------- threads for screwing
   cap here      |       |                |         nipple onto bomb
           |     |___________           |
           |______          |         |
                  | |^^^^^^^^^        |
                  |_|                 |
                                    |
                   |________________|
```

When making using this type of initiator, a hole must be drilled into whatever container is used to make the bomb out of. The nipple is then screwed into the hole so that it fits tightly. Then, the cap can be carried and placed on the bomb when it is to be thrown. The cap should be bent a small amount before it is placed on the nipple, to make sure that it stays in place. The only other problem involved with an impact detonating bomb is that it must strike a hard surface on the nipple to set it off. By attaching fins or a small parachute on the end of the bomb opposite the primer, the bomb, when thrown, should strike the ground on the primer, and explode. Of course, a bomb with mercury fulminate in each end will go off on impact regardless of which end it strikes on, but mercury fulminate is also likely to go off if the person carrying the bomb is bumped hard.

4.23 ELECTRICAL IGNITION

Electrical ignition systems for detonation are usually the safest and most reliable form of ignition. Electrical systems are ideal for demolition work, if one doesn't have to worry so much about being caught. With two spools of 500 ft of wire and a car battery, one can detonate explosives from a "safe", comfortable distance, and be sure that there is nobody around that could get hurt. With an electrical system, one can control exactly what time a device will explode, within fractions of a second. Detonation can be aborted in less than a second's warning, if a person suddenly walks by the detonation sight, or if a police car chooses to roll by at the time. The two best electrical igniters are military squibs and model rocketry igniters. Blasting caps for construction also work well. Model rocketry igniters are sold in packages of six, and cost about $1.00 per pack. All that need be done to use them is connect it to two wires and run a current through them. Military squibs are difficult to get, but they are a little bit better, since they explode when a current is run through them, whereas rocketry igniters only burst into flame. Military squibs can be used to set off sensitive high explosives, such as R.D.X., or potassium chlorate mixed with petroleum jelly. Igniters can be used to set off black powder, mercury fulminate, or guncotton, which in turn, can set of a high order explosive.

4.24 ELECTRO−MECHANICAL IGNITION

Electro−mechanical ignition systems are systems that use some type of mechanical switch to set off an explosive charge electrically. This type of switch is typically used in booby traps or other devices in which the person who places the bomb does not wish to be anywhere near the device when it explodes. Several types of electro−mechanical detonators will be discussed.

4.241 Mercury Switches

Mercury switches are a switch that uses the fact that mercury metal conducts electricity, as do all metals, but mercury metal is a liquid at room temperatures. A typical mercury switch is a sealed glass tube with two electrodes and a bead of mercury metal. It is sealed because of mercury's nasty habit of giving off brain−damaging vapors. The diagram below may help to explain a mercury switch.

```
                          ______________
                     A  /              \   B
     _____wire +______/___________      \
                      \   ( Hg )  |     /
                       \ _(_Hg_)__|___/
                                  |
                                  |
                        wire − |
                                  |
                                  |
```

When the drop of mercury ("Hg" is mercury's atomic symbol) touches both contacts, current flows through the switch. If this particular switch was in its present position, A−−−B, current would be flowing, since the mercury can touch both contacts in the horizontal position.

If, however, it was in the | position, the drop of mercury would only touch the + contact on the A side. Current, then couldn't flow, since mercury does not reach both contacts when the switch is in the vertical position.

This type of switch is ideal to place by a door. If it were placed in the path of a swinging door in the vertical position, the motion of the door would knock the switch down, if it was held to the ground by a piece if tape. This would tilt the switch into the vertical position, causing the mercury to touch both contacts, allowing current to flow through the mercury, and to the igniter or squib in an explosive device. Imagine opening a door and having it slammed in your face by an explosion.

4.242 Tripwire Switches

A tripwire is an element of the classic booby trap. By placing a nearly invisible line of string or fishing line in the probable path of a victim, and by putting some type of trap there also, nasty things can be caused to occur. If this mode of thought is applied to explosives, how would one use such a tripwire to detonate a bomb. The technique is simple. By wrapping the tips of a standard clothes−pin with aluminum foil, and placing something between them, and connecting wires to each aluminum foil contact, an electric tripwire can be made, If a piece of wood attached to the tripwire was placed between the contacts on the clothes−pin, the clothes−pin would serve as a switch. When the tripwire was pulled, the clothes−pin would snap together, allowing current to flow between the two pieces of aluminum foil, thereby completing a circuit, which would have the igniter or squib in it. Current would flow between the contacts to the igniter or squib, heat the igniter or squib, causing it to explode.

```
                    __________________________________
                    \_foil___________________________/
Insert strip of       ----------------------------spring
wood with trip-      _foil___________________________
wire between foil   /________________________________\
contacts.
```

Make sure that the aluminum foil contacts do not touch the spring, since the spring also conducts electricity.

4.243 Radio Control Detonators

In the movies, every terrorist or criminal uses a radio controlled detonator to set off explosives. With a good radio detonator, one can be several miles away from the device, and still control exactly when it explodes, in much the same way as an electrical switch. The problem with radio detonators is that they are rather costly. However, there could possibly be a reason that a terrorist would wish to spend the amounts of money involved with a RC (radio control) system and use it as a detonator. If such an individual wanted to devise an RC detonator, all he would need to do is visit the local hobby store or toy store, and buy a radio controlled toy. Taking it back to his/her abode, all that he/she would have to do is detach the solenoid/motor that controls the motion of the front wheels of a RC car, or detach the solenoid/motor of the elevators/rudder of a RC plane, or the rudder of a RC boat, and re−connect the squib or rocket engine igniter to the contacts for the solenoid/motor. The device should be tested several times with squibs or igniters, and fully charged batteries should be in both he controller and the receiver (the part that used to move parts before the device became a detonator).

<−−Safety**−−>Index<−−**Delays−−>

4.3 DELAYS

- FUSE DELAYS
- TIMER DELAYS
- CHEMICAL DELAYS

A delay is a device which causes time to pass from when a device is set up to the time that it explodes. A regular fuse is a delay, but it would cost quite a bit to have a 24 hour delay with a fuse. This section deals with the different types of delays that can be employed by a terrorist who wishes to be sure that his bomb will go off, but wants to be out of the country when it does.

4.31 FUSE DELAYS

It is extremely simple to delay explosive devices that employ fuses for ignition. Perhaps the simplest way to do so is with a cigarette. An average cigarette burns for about 8 minutes. The higher the "tar" and nicotine rating, the slower the cigarette burns. Low "tar" and nicotine cigarettes burn quicker than the higher "tar" and nicotine cigarettes, but they are also less likely to go out if left unattended, i.e. not smoked. Depending on the wind or draft in a given place, a high "tar" cigarette is better for delaying the ignition of a fuse, but there must be enough wind or draft to give the cigarette enough oxygen to burn. People who use cigarettes for the purpose of delaying fuses will often test the cigarettes that they plan to use in advance to make sure they stay lit and to see how long it will burn. Once a cigarettes burn rate is determined, it is a simple matter of carefully putting a hole all the way through a cigarette with a toothpick at the point desired, and pushing the fuse for a device in the hole formed.

```
                              |=|
                              |=| ---------- filter
                              |=|
                              | |
                              | |
                              |o| ---------- hole for fuse
cigarette ------------        | |
                              | |
                              | |
                              | |
                              | |
                              | |
                              | |
                              | |
                              | |
                              |_| ---------- light this end
```

A similar type of device can be make from powdered charcoal and a sheet of paper. Simply roll the sheet of paper into a thin tube, and fill it with powdered charcoal. Punch a hole in it at the desired location, and insert a fuse. Both ends must be glued closed, and one end of the delay must be doused with lighter fluid before it is lit. Or, a small charge of gunpowder mixed with powdered charcoal could conceivably used for igniting such a delay. A chain of charcoal briquettes can be used as a delay by merely lining up a few bricks of charcoal so that they touch each other, end on end, and lighting the first brick. Incense, which can be purchased at almost any novelty or party supply store, can also be used as a fairly reliable delay. By wrapping the fuse about the end of an incense stick, delays of up to 1/2 an hour are possible. Finally, it is possible to make a relatively slow−burning fuse in the home. By dissolving about one teaspoon of black powder in about 1/4 a cup of boiling water, and, while it is still hot, soaking in it a long piece of all cotton string, a slow−burning fuse can be made. After the soaked string dries, it must then be tied to the fuse of an explosive device. Sometimes, the end of the slow burning fuse that meets the normal fuse has a charge of black powder or gunpowder at the intersection point to insure ignition, since the slow−burning fuse does not burn at a very high temperature. A similar type of slow fuse can be made by taking the above mixture of boiling water and black powder and pouring it on a long piece of toilet paper. The wet toilet paper is then gently twisted up so that it resembles a firecracker fuse, and is allowed to dry.

4.32 TIMER DELAYS

Timer delays, or "time bombs" are usually employed by an individual who wishes to threaten a place with a bomb and demand money to reveal its location and means to disarm it. Such a device could be placed in any populated place if it were concealed properly. There are several ways to build a timer delay. By simply using a screw as one contact at the time that detonation is desired, and using the hour hand of a clock as the other contact, a simple timer can be made. The minute hand of a clock should be removed, unless a delay of less than an hour is desired.

```
     ___________________________________   to igniter      from igniter
    |                                   |
    |              12                   |       :            :
    |        11            1            |       :            :
    |                                   |       :            :
    |    10                    2        |       :            :
    |                 o.................|.......:            :
    |                                   |                    :
    |  9                          3     |                    :
    |                                   |                    :
    |                                   |                    :
    |   8                       4       |                    :
    |                        o..........|......              :
    |         7              5          |     :              :
    |                6                  |     :.+.....−......:
    |___________________________________|     __|_____|
                               |           |
                               |  battery  |
  o − contacts                 |           |
  ..... − wire                 |           |
                               |___________|
```

This device is set to go off in eleven hours. When the hour hand of the clock reaches the contact near the numeral 5, it will complete the circuit, allowing current to flow through the igniter or squib.

The main disadvantage with this type of timer is that it can only be set for a maximum time of 12 hours. If an electronic timer is used, such as that in an electronic clock, then delays of up to 24 hours are possible. By removing the speaker from an electronic clock, and attaching the wires of a squib or igniter to them, a timer with a delay of up to 24 hours can be made. To utilize this type of timer, one must have a socket that the clock can be plugged into. All that one has to do is set the alarm time of the clock to the desired time, connect the leads, and go away. This could also be done with an electronic watch, if a larger battery were used, and the current to the speaker of the watch was stepped up via a transformer. This would be good, since such a timer could be extremely small. The timer in a VCR (Video Cassette Recorder) would be ideal. VCRs can usually be set for times of up to a week. The leads from the timer to the recording equipment would be the ones that an igniter or squib would be connected to. Also, one can buy timers from electronics stores that would be ideal. Finally, one could employ a digital watch, and use a relay, or electro−magnetic switch to fire the igniter, and the current of the watch would not have to be stepped up.

4.33 CHEMICAL DELAYS

Chemical delays are uncommon, but they can be extremely effective in some cases. If a glass container is filled with concentrated sulfuric acid, and capped with several thicknesses of aluminum foil, or a cap that it will eat through, then it can be used as a delay. Sulfuric acid will react with aluminum foil to produce aluminum sulfate and hydrogen gas, and so the container must be open to the air on one end so that the pressure of the hydrogen gas that is forming does not break the container. See diagram below.

```
 _              _
| |            | |
| |            | |
| |            | |
| |____________| |
| |            | |
| |  sulfuric  | |
| |            | |
| |  acid      | |
| |            | |---------- aluminum foil
| |____________| |           (several thicknesses)
|________________|
```

The aluminum foil is placed over the bottom of the container and secured there with tape. When the acid eats through the aluminum foil, it can be used to ignite an explosive device in several ways.

1. Sulfuric acid is a good conductor of electricity. If the acid that eats through the foil is collected in a glass container placed underneath the foil, and two wires are placed in the glass container, a current will be able to flow through the acid when both of the wires are immersed in the acid.
2. Sulfuric acid reacts very violently with potassium chlorate. If the acid drips down into a container containing potassium chlorate, the potassium chlorate will burst into flame. This flame can be used to ignite a fuse, or the potassium chlorate can be the igniter for a thermit bomb, if some potassium chlorate is mixed in a 50/50 ratio with the thermit, and this mixture is used as an igniter for the rest of the thermit.
3. Sulfuric acid reacts with potassium permanganate in a similar way.

<−−Ignition devices**−−>Index<−−**Explosive containers−−>

4.4 EXPLOSIVE CONTAINERS

- PAPER CONTAINERS
- METAL CONTAINERS
- GLASS CONTAINERS
- PLASTIC CONTAINERS

This section will cover everything from making a simple firecracker to a complicated scheme for detonating an insensitive high explosive, both of which are methods that could be utilized by perpetrators of terror.

4.41 PAPER CONTAINERS

Paper was the first container ever used for explosives, since it was first used by the Chinese to make fireworks. Paper containers are usually very simple to make, and are certainly the cheapest. There are many possible uses for paper in containing explosives, and the two most obvious are in firecrackers and rocket engines. Simply by rolling up a long sheet of paper, and gluing it together, one can make a simple rocket engine. Perhaps a more interesting and dangerous use is in the firecracker. The firecracker shown here is one of Mexican design. It is called a "polumna", meaning "dove". The process of their manufacture is not unlike that of making a paper football. If one takes a sheet of paper about 16 inches in length by 1.5 inches wide, and fold one corner so that it looks like this:

```
 _______________________________________________________
|                                                      |\
|                                                      | \
|                                                      |  \
|______________________________________________________|___\
```

and then fold it again so that it looks like this:

```
 ______________________________________________________
|                                                     /|
|                                                    / |
|                                                   /  |
|__________________________________________________/___|
```

A pocket is formed. This pocket can be filled with black powder, pyrodex, flash powder, gunpowder,rocket engine powder, or any of the quick−burning fuel−oxidizer mixtures that occur in the form of a fine powder. A fuse is then inserted, and one continues the triangular folds, being careful not to spill out any of the explosive. When the polumna is finished, it should be taped together very tightly, since this will increase the strength of the container, and produce a louder and more powerful explosion when it is lit. The finished polumna should look like a 1/4 inch − 1/3 inch thick triangle, like the one shown below:

```
       ^
      / \  ----- securely tape all corners
     /   \
    /     \
   /       \
  /         \
 /           \___________________________
/_____________\__/__/__/__/__/__/__/__/__/  ---------- fuse
```

4.42 METAL CONTAINERS

The classic pipe bomb is the best known example of a metal−contained explosive. Idiot anarchists take white tipped matches and cut off the match heads. They pound one end of a pipe closed with a hammer, pour in the white−tipped matches, and then pound the other end closed. This process often kills the fool, since when he pounds the pipe closed, he could very easily cause enough friction between the match heads to cause them to ignite and explode the unfinished bomb. By using pipe caps, the process is somewhat safer, and the less stupid anarchist would never use white tipped matches in a bomb. He would buy two pipe caps and threaded pipe (fig. 1). First, he would drill a hole in one pipe cap, and put a fuse in it so that it will not come out, and so powder will not escape during handling. The fuse would be at least 3/4 an inch long inside the bomb. He would then screw the cap with the fuse in it on tightly, possibly putting a drop of super glue on it to hold it tight. He would then pour his explosive powder in the bomb. To pack it tightly, he would take a large wad of tissue paper and, after filling the pipe to the very top, pack the powder down, by using the paper as a ramrod tip, and pushing it with a pencil or other wide ended object, until it would not move any further. Finally, he would screw the other pipe cap on, and glue it. The tissue paper would help prevent some of the powder from being caught in the threads of the pipe or pipe cap from being crushed and subject to friction, which might ignite the powder, causing an explosion during manufacture. An assembled bomb is shown in fig. 2.

```
 _______                                            ________
|       |                                          |        |
| |vvvvv          ________________                  vvvvvv  |
| |          ^^^^^                ^^^^^^                  | |
| |         |____________________________|                | |
| |                                                       | |
| |                                                       | |
| |                                                       | |
| |                                                       | |
| |          ____________________________                 | |
| |         |                            |                | |
|  ^^^^^     vvvvvv________________vvvvvv       ^^^^^^    |
|_______|                                          |________|
```

fig. 1. Threaded pipe and endcaps.

```
 ________                                  ________
| _____|__________________________________|_____ |
| |_____________________________________________| |
| |: : : : |- - - - - - - - - - - - - - - - - - -| |
| | tissue | - - - - - - - - - - - - - - - - - - |_|
| | : : :  |- - - low order explosive - - ----------------------
| | paper  | - - - - - - - - - - - - - - - - - - |-|    fuse
| |: : : : |- - - - - - - - - - - - - - - - - - -| |
| |________|____________________________________| |
| |_____________________________________________| |
|______|                                  |______|
endcap                 pipe                endcap
                                           w/ hole
```

fig. 2. Assembled pipe bomb.

This is one possible design that a mad bomber would use. If, however, he did not have access to threaded pipe with endcaps, he could always use a piece of copper or aluminum pipe, since it is easily bent into a suitable position. A major problem with copper piping, however, is bending and folding it without tearing it; if too much force is used when folding and bending copper pipe, it will split along the fold. The safest method for making a pipe bomb out of copper or aluminum pipe is similar to the method with pipe and endcaps. First, one flattens one end of a copper or aluminum pipe carefully, making sure not to tear or rip the piping. Then, the flat end of the pipe should be folded over at least once, if this does not rip the pipe. A fuse hole should be drilled in the pipe near the now closed end, and the fuse should be inserted. Next, the bomb−builder would fill the bomb with a low order explosive, and pack it with a large wad of tissue paper. He would then flatten and fold the other end of the pipe with a pair of pliers. If he was not too dumb, he would do this slowly, since the process of folding and bending metal gives off heat, which could set off the explosive. A diagram is presented below:

```
                                                    _______
 _______________________________________________/        |
|                                                         |
|                                                    o    |
|_______________________________________________         |
                                                 \_______|
```

fig. 1. pipe with one end flattened and fuse hole drilled (top view)

```
                                                  _____
 ____________________________________________/   |   |
|                                                 |   |
|                                              o  |   |
|____________________________________________    |   |
                                              \__|__|
```

fig. 2. pipe with one end flattened and folded up (top view)

```
                          ____________ fuse hole
                         |
                         v
__________________________________________________
|                              \ |____ |
|                               \____| |
|                                ______|
|                               /
|______________________________/__________________
```

fig. 3. pipe with flattened and folded end (side view)

```
                                            _________________ fuse
                                           /
                                           |
 ________    ______________________________|___    _______
 |  ____|  /     |- - - - - - - - - - - -| - -  \  |___  |
 |  |_____/tissue| - - - - - - - - - - - - -|- - \_____| |
 |________ paper |- - -  low order explosive -  _______|
       \         | - - - - - - - - - - - - - - - - /
        \_______________________________________/
```

fig. 4. completed bomb, showing tissue paper packing and explosive (side view)

A CO2 cartridge from a BB gun is another excellent container for a low−order explosive. It has one minor disadvantage: it is time consuming to fill. But this can be rectified by widening the opening of the cartridge with a pointed tool. Then, all that would have to be done is to fill the CO2 cartridge with any low−order explosive, or any of the fast burning fuel−oxidizer mixtures, and insert a fuse. These devices are commonly called "crater makers".

A CO2 cartridge also works well as a container for a thermit incendiary device, but it must be modified. The opening in the end must be widened, so that the ignition mixture, such as powdered magnesium, does not explode. The fuse will ignite the powdered magnesium, which, in turn, would ignite the thermit.

The previously mentioned designs for explosive devices are fine for low−order explosives, but are unsuitable for high−order explosives, since the latter requires a shockwave to be detonated. A design employing a smaller low−order explosive device inside a larger device containing a high−order explosive would probably be used. It would look something like:

```
                                   _______________________ fuse
                                   |
                                   |
                                   |
 _________                         |           _________
|   ____|__________________________|___________|____    |
|   | * * * * * * * * * * * * * * *|* * * * * * *  |    |
|   |  * * * * * *  high explosive | * * * * * * * |    |
|   | * * * * * * * * * * * * * * *|* * * * * * *  |    |
|   |  *   ______    ______________|_    ______  * |    |
|   | * * |  __|   /   - - - - - - - | \   |__  | *  |    |
|   |  *  |  |____/   low explosive - \____|  |  * |    |
|   | * * |_______   - - - - - - - - - -  _______| *  |    |
|   |  * * * * *  \  - - - - - - - - - -  /  * * * * * |    |
|   | * * * * * *  \_________________/  * * * * *  |    |
|   |  * * * * * * * * * * * * * * * * * * * * * * |    |
|   | * * * * * * * * * * * * * * * * * * * * * *  |    |
|   |  * * * * * * * * * * * * * * * * * * * * * * |    |
|   |______________________________________________|    |
|_______|                                      |_______|
```

If the large high explosive container is small, such as a CO_2 cartridge, then a segment of a hollow radio antenna can be made into a low−order pipe bomb, which can be fitted with a fuse, and inserted into the CO_2 cartridge.

4.43 GLASS CONTAINERS

Glass containers can be suitable for low−order explosives, but there are problems with them. First, a glass container can be broken relatively easily compared to metal or plastic containers. Secondly, in the not−too−unlikely event of an "accident", the person making the device would probably be seriously injured, even if the device was small. A bomb made out of a sample perfume bottle−sized container exploded in the hands of one boy, and he still has pieces of glass in his hand. He is also missing the final segment of his ring finger, which was cut off by a sharp piece of flying glass...

Nonetheless, glass containers such as perfume bottles can be used by a demented individual, since such a device would not be detected by metal detectors in an airport or other public place. All that need be done is fill the container, and drill a hole in the plastic cap that the fuse fits tightly in, and screw the cap−fuse assembly on.

```
          ________________________  fuse
          |
          |
          |
     _____|_____
     | ___|___ |
     | >  |  < |  drill hole in cap, and insert fuse;
     | >  |  < |  be sure fuse will not come out of cap
     | >  |  < |
     |    |    |
     |         |
     |         |
     |         |  screw cap on bottle
     |         |
     |         |
     V         V

       _________
      <         >
      <         >
      <         >
        /     \
       /       \
      /         \
     |           |  fill bottle with low−order explosive
     |           |
     |           |
     |           |
     |           |
     |___________|
```

Large explosive devices made from glass containers are not practical, since glass is not an exceptionally strong container. Much of the explosive that is used to fill the container is wasted if the container is much larger than a 16 oz. soda bottle. Also, glass containers are usually unsuitable for high explosive devices, since a glass container would probably not withstand the explosion of the initiator; it would shatter before the high explosive was able to detonate.

4.44 PLASTIC CONTAINERS

Plastic containers are perhaps the best containers for explosives, since they can be any size or shape, and are not fragile like glass. Plastic piping can be bought at hardware or plumbing stores, and a device much like the ones used for metal containers can be made. The high−order version works well with plastic piping. If the entire device is made out of plastic, it is not detectable by metal detectors. Plastic containers can usually be shaped by heating the container, and bending it at the appropriate place. They can be glued closed with epoxy or other cement for plastics. Epoxy alone can be used as an endcap, if a wad of tissue paper is placed in the piping. Epoxy with a drying agent works best in this type of device.

```
||              ||
||              ||
||\____________/||
||              ||
||     epoxy    ||
||______________||
||              ||
||    tissue    ||
||     paper    ||
||______________||
||**************||
||**************||
||**************||
||**************||
||** explosive **||
||**************||
||***********_______________________  fuse
||**************||
||--------------||
||              ||
||    tissue    ||
||     paper    ||
||______________||
||              ||
||     epoxy    ||
|| ____________ ||
||/            \||
||              ||
||              ||
```

One end must be made first, and be allowed to dry completely before the device can be filled with powder and fused. Then, with another piece of tissue paper, pack the powder tightly, and cover it with plenty of epoxy. PVC pipe works well for this type of device, but it cannot be used if the pipe had an inside diameter greater than 3/4 of an inch. Other plastic putties can be used in this type of device, but epoxy with a drying agent works best.

<−−Delays**−−>Index<−−**Advanced uses for explosives−−>

4.5 ADVANCED USES FOR EXPLOSIVES

- SHAPED CHARGES
- TUBE EXPLOSIVES
- ATOMIZED PARTICLE EXPLOSIONS
- LIGHTBULB BOMBS
- BOOK BOMBS
- PHONE BOMBS

The techniques presented here are those that could be used by a person who had some degree of knowledge of the use of explosives. Some of this information comes from demolitions books, or from military handbooks. Advanced uses for explosives usually involved shaped charges, or utilize a minimum amount of explosive to do a maximum amount of damage. They almost always involve high− order explosives. **KEEP IN MIND THAT ALL EXPLOSIVES ARE DANGEROUS, AND SHOULD NEVER BE MADE OR USED!!**

More info on this topic can be found in The Big Book Of Mischief.

4.51 SHAPED CHARGES

A shaped charge is an explosive device that, upon detonation, directs the explosive force of detonation at a small target area. This process can be used to breach the strongest armor, since forces of literally millions of pounds of pressure per square inch can be generated. Shaped charges employ high−order explosives, and usually electric ignition systems.An example of a shaped charge is shown below.

```
                 + wire ________           _______ - wire
                                 |        |
                                 |        |
                                 |        |
_                      __________|________|____________
^                     | _________|________|__________ |
|                     | |        |        |         | |
|                     | |       \ igniter /         | |
|                     | |        \_______/          | |
|                     | |     priming charge        | |
|                     | |   (mercury fulminate)     | |
|                     | |             ^             | |
|                     | |            / \            | |
|                     | |           /   \           | |
|                     | |          /     \          | |
|                     | |         /       \         | |
|                     | |        /         \        | |
|                     | |       /           \       | |
                      | |      /             \      | |
8 inches high         | |     /               \     | |
                      | |    /       high      \    | |
|                     | |   /      explosive    \   | |
|                     | |  /        charge       \  | |
|                     | | /                       \ | |
|                     | |/                         \| |
|                     | |             ^             | |
|                     | |            / \            | |
|                     | |           /   \           | |
|                     | |          /     \          | |
|                     | |         /       \         | |
|                     | |        /         \        | |
|                     | |       /           \       | |
|                     | |      /             \      | |
|                     | |     /               \     | | ------- 1/2 inch
|                     | |    /                 \    | |         thick steel
|                     | |   /                   \   | |         pipe
|                     | |  /                     \  | |
|                     | | /                       \ | |
|                     | |/                         \| |
|      hole for       | |                           | |     hole for
|      screw          | |                           | |      screw
|                     | |                           | |
V_______   ___________| |                           | |___________  _________
|______|   |____________|                           |_____________| |_______|
                        |<------- 8 inches -------->|
```

If a device such as this is screwed to a safe, for example, it would direct most of the explosive force at a point about 1 inch away from the opening of the pipe. The basis for shaped charges is a cone−shaped opening in the explosive material. This cone should have an angle of 45 degrees. A device such as this one could also be attached to a metal surface with a powerful electromagnet.

4.52 TUBE EXPLOSIVES

A variation on shaped charges, tube explosives can be used in ways that shaped charges cannot. If a piece of 1/2 inch plastic tubing was filled with a sensitive high explosive like R.D.X., and prepared as the plastic explosive container in section 4.44, a different sort of shaped charge could be produced; a charge that directs explosive force in a circular manner. This type of explosive could be wrapped around a column, or a doorknob, or a telephone pole. The explosion would be directed in and out, and most likely destroy whatever it was wrapped around. In an unbent state, a tube explosive would look like this:

```
||      ||
||      ||
||\____/||
|| epoxy||
||______||
||      ||
||tissue||
|| paper||
||______||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
|| RDX  ||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
||******||
|| ____ ||
|| | s| ||
|| | q| ||
|| | u| ||
|| | i| ||
|| | b| ||
|| | b| ||
|| |__| ||
||__||__||
||tissue||
|| paper||
||__||__||
||  ||  ||
|| epoxy||
||  ||  ||
|| _||_ ||
||/ || \||
||  ||  ||
||  ||  ||
    ||_______ + wire ______________
    |
    |________ - wire ______________
```

When an assassin or terrorist wishes to use a tube bomb, he must wrap it around whatever thing he wishes to destroy, and epoxy the ends of the tube bomb together. After it dries, he/she can connect wires to the squib wires, and detonate the bomb, with any method of electric detonation.

4.53 ATOMIZED PARTICLE EXPLOSIONS

If a highly flammable substance is atomized, or, divided into very small particles, and large amounts of it is burned in a confined area, an explosion similar to that occurring in the cylinder of an automobile is produced. The tiny droplets of gasoline burn in the air, and the hot gases expand rapidly, pushing the cylinder up. Similarly, if a gallon of gasoline was atomized and ignited in a building, it is very possible that the expanding gassed would push the walls of the building down. This phenomenon is called an atomized particle explosion. If a person can effectively atomize a large amount of a highly flammable substance and ignite it, he could bring down a large building, bridge, or other structure. Atomizing a large amount of gasoline, for example, can be extremely difficult, unless one has the aid of a high explosive. If a gallon jug of gasoline was placed directly over a high explosive charge, and the charge was detonated, the gasoline would instantly be atomized and ignited. If this occurred in a building, for example, an atomized particle explosion would surely occur. Only a small amount of high explosive would be necessary to accomplish this feat, about 1/2 a pound of T.N.T. or 1/4 a pound of R.D.X. Also, instead of gasoline, powdered aluminum could be used. It is necessary that a high explosive be used to atomize a flammable material, since a low−order explosion does not occur quickly enough to atomize or ignite the flammable material.

4.54 LIGHTBULB BOMBS

An automatic reaction to walking into a dark room is to turn on the light. This can be fatal, if a lightbulb bomb has been placed in the overhead light socket. A lightbulb bomb is surprisingly easy to make. It also comes with its own initiator and electric ignition system. On some lightbulbs, the lightbulb glass can be removed from the metal base by heating the base of a lightbulb in a gas flame, such as that of a blowtorch or gas stove. This must be done carefully, since the inside of a lightbulb is a vacuum. When the glue gets hot enough, the glass bulb can be pulled off the metal base. On other bulbs, it is necessary to heat the glass directly with a blowtorch or oxy−acetylene torch. When the bulb is red hot, a hole must be carefully poked in the bulb, remembering the vacuum state inside the bulb. In either case, once the bulb and/or base has cooled down to room temperature or lower, the bulb can be filled with an explosive material, such as black powder. If the glass was removed from the metal base, it must be glued back on to the base with epoxy. If a hole was put in the bulb, a piece of duct tape is sufficient to hold the explosive in the in the bulb. Then, after making sure that the socket has no power by checking with a working lightbulb, all that need be done is to screw the lightbulb bomb into the socket. Such a device has been used by terrorists or assassins with much success, since nobody can search the room for a bomb without first turning on the light.

4.55 BOOK BOMBS

Concealing a bomb can be extremely difficult in a day and age where perpetrators of violence run wild. Bags and briefcases are often searched by authorities whenever one enters a place where an individual might intend to set off a bomb. One approach to disguising a bomb is to build what is called a book bomb; an explosive device that is entirely contained inside of a book. Usually, a relatively large book is required, and the book must be of the hardback variety to hide any protrusions of a bomb. Dictionaries, law books, large textbooks, and other such books work well. When an individual makes a bookbomb, he/she must choose a type of book that is appropriate for the place where the book bomb will be placed. The actual construction of a book bomb can be done by anyone who possesses an electric drill and a coping saw. First, all of the pages of the book must be glued together. By pouring an entire container of water−soluble glue into a large bucket, and filling the bucket with boiling water, a glue−water solution can be made that will hold all of the book's pages together tightly. After the glue−water solution has cooled to a bearable temperature, and the solution has been stirred well, the pages of the book must be immersed in the glue−water solution, and each page must be thoroughly soaked. It is extremely important that the covers of the book do not get stuck to the pages of the book while the pages are drying. Suspending the book by both covers and clamping the pages together in a vice works best. When the pages dry, after about three days to a week, a hole must be drilled into the now rigid pages, and they should drill out much like wood. Then, by inserting the coping saw blade through the pages and sawing out a rectangle from the middle of the book, the individual will be left with a shell of the book's pages. The pages, when drilled out, should look like this:

```
 ________________________
| _____________________ |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |                   | |
| |___________________| |
|_______________________|
  (book covers omitted)
```

This rectangle must be securely glued to the back cover of the book. After building his/her bomb, which usually is of the timer or radio controlled variety, the bomber places it inside the book. The bomb itself, and whatever timer or detonator is used, should be packed in foam to prevent it from rolling or shifting about. Finally, after the timer is set, or the radio control has been turned on, the front cover is glued closed, and the bomb is taken to its destination.

4.56 PHONE BOMBS

The phone bomb is an explosive device that has been used in the past to kill or injure a specific individual. The basic idea is simple: when the person answers the phone, the bomb explodes. If a small but powerful high explosive device with a squib was placed in the phone receiver, when the current flowed through the receiver, the squib would explode, detonating the high explosive in the person's hand. Nasty. All that has to be done is acquire a squib, and tape the receiver switch down. Unscrew the mouthpiece cover, and remove the speaker, and connect the squib's leads where it was. Place a high explosive putty, such as C−1 (see section 3.31) in the receiver, and screw the cover on, making sure that the squib is surrounded by the C−1. Hang the phone up, and leave the tape in place. When the individual to whom the phone belongs attempts to answer the phone, he will notice the tape, and remove it. This will allow current to flow through the squib. Note that the device will not explode by merely making a phone call; the owner of the phone must lift up the receiver, and remove the tape. It is highly probable that the phone will be by his/her ear when the device explodes...

<−−Explosive containers**−−>Index<−−**Ammo for projectile weapons.−−>

5.0 SPECIAL AMMUNITION FOR PROJECTILE WEAPONS

Explosive and/or poisoned ammunition is an important part of a social deviant's arsenal. Such ammunition gives the user a distinct advantage over individual who use normal ammunition, since a grazing hit is good enough to kill. Special ammunition can be made for many types of weapons, from crossbows to shotguns.

<−−Advanced uses for explosives**−−>Index<−−**Primitive proj. weapons−−>

5.1 SPECIAL AMMUNITION FOR PRIMITIVE WEAPONS

- BOW AND CROSSBOW AMMUNITIONS
- SPECIAL AMMUNITION FOR BLOWGUNS
- SPECIAL AMMUNITION FOR WRISTROCKETS AND SLINGSHOTS

For the purposes of this publication, we will call any weapon primitive that does not employ burning gunpowder to propel a projectile forward. This means blowguns, bows and crossbows, and wristrockets.

5.11 BOW AND CROSSBOW AMMUNITION

Bows and crossbows both fire arrows or bolts as ammunition. It is extremely simple to poison an arrow or bolt, but it is a more difficult matter to produce explosive arrows or bolts. If, however, one can acquire aluminum piping that is the same diameter of an arrow or crossbow bolt, the entire segment of piping can be converted into an explosive device that detonates upon impact, or with a fuse. All that need be done is find an aluminum tube of the right length and diameter, and plug the back end with tissue paper and epoxy. Fill the tube with any type of low−order explosive or sensitive high− order explosive up to about 1/2 an inch from the top. Cut a slot in the piece of tubing, and carefully squeeze the top of the tube into a round point, making sure to leave a small hole. Place a no. 11 percussion cap over the hole, and secure it with super glue. Finally, wrap the end of the device with electrical or duct tape, and make fins out of tape. Or, fins can be bought at a sporting goods store, and glued to the shaft. The finished product should look like:

```
          _____
          |   | ---------- no. 11 percussion cap
          ||*||
           |*|
           |*|
           |*|
           |*|
           |*|
           |*| ----------- aluminum piping
           |*|
           |e|
           |x|
           |p|
           |l|
           |o|
           |s|
           |i|
           |v|
           |e|
           |*|
           |*|
           |*|
           |*|
           |*|
           |*|
           |*|
          /|_|\
         / |t| \
         | |p| |
         | |_| |
         | |e| | -------- fins
         | |p| |
         | |y| |
         |_|_|_|
           |_|
tp: tissue paper
epy: epoxy
```

When the arrow or bolt strikes a hard surface, the percussion cap explodes, igniting or detonating the explosive.

5.12 SPECIAL AMMUNITION FOR BLOWGUNS

The blowgun is an interesting weapon which has several advantages. A blowgun can be extremely accurate, concealable, and deliver an explosive or poisoned projectile. The manufacture of an explosive dart or projectile is not difficult. Perhaps the most simple design for such involves the use of a pill capsule, such as the kind that are taken for headaches or allergies. Such a capsule could easily be opened, and the medicine removed. Next, the capsule would be re−filled with an impact−sensitive explosive. An additional high explosive charge could be placed behind the impact−sensitive explosive, if one of the larger capsules were used. Finally, the explosive capsule would be re−glued back together, and a tassel or cotton would be glued to the end containing the high explosive, to insure that the impact−detonating explosive struck the target first. Such a device would probably be about 3/4 of an inch long, not including the tassel or cotton, and look something like this:

```
  ____________________
 /mercury |           \-----------------------
(fulminate|   R.D.X.   )---------------------- } tassels
 \________|___________/-----------------------
```

5.13 SPECIAL AMMUNITION FOR WRISTROCKETS AND SLINGSHOTS

A modern wristrocket is a formidable weapon. It can throw a shooter marble about 500 ft. with reasonable accuracy. Inside of 200 ft., it could well be lethal to a man or animal, if it struck in a vital area. Because of the relatively large sized projectile that can be used in a wristrocket, the wristrocket can be adapted to throw relatively powerful explosive projectiles. A small segment of aluminum pipe could be made into an impact−detonating device by filling it with an impact−sensitive explosive material. Also, such a pipe could be filled with a low−order explosive, and fitted with a fuse, which would be lit before the device was shot. One would have to make sure that the fuse was of sufficient length to insure that the device did not explode before it reached its intended target. Finally, .22 caliber caps, such as the kind that are used in .22 caliber blank guns, make excellent exploding ammunition for wristrockets, but they must be used at a relatively close range, because of their light weight.

<−−Ammo for projectile weap.**−−>Index<−−**Ammo for firearms−−>

5.2 SPECIAL AMMUNITION FOR FIREARMS

- SPECIAL AMMUNITION FOR HANDGUNS
- SPECIAL AMMUNITION FOR SHOTGUNS

When special ammunition is used in combination with the power and rapidity of modern firearms, it becomes very easy to take on a small army with a single weapon. It is possible to buy explosive ammunition, but that can be difficult to do. Such ammunition can also be manufactured in the home. There is, however, a risk involved with modifying any ammunition. If the ammunition is modified incorrectly, in such a way that it makes the bullet even the slightest bit wider, an explosion in the barrel of the weapon will occur. For this reason, *NOBODY SHOULD EVER ATTEMPT TO MANUFACTURE SUCH AMMUNITION*.

5.21 SPECIAL AMMUNITION FOR HANDGUNS

If an individual wished to produce explosive ammunition for his/her handgun, he/she could do it, provided that the person had an impact−sensitive explosive and a few simple tools. One would first purchase all lead bullets, and then make or acquire an impact−detonating explosive. By drilling a hole in a lead bullet with a drill, a space could be created for the placement of an explosive. After filling the hole with an explosive, it would be sealed in the bullet with a drop of hot wax from a candle. A diagram of a completed exploding bullet is shown below.

```
   _o_ ------------ drop of wax
  /|*|\
 | |*|-|----------- impact−sensitive explosive
 | |_| |
 |_____|
```

This hollow space design also works for putting poison in bullets.

5.22 SPECIAL AMMUNITION FOR SHOTGUNS

Because of their large bore and high power, it is possible to create some extremely powerful special ammunition for use in shotguns. If a shotgun shell is opened at the top, and the shot removed, the shell can be re−closed. Then, if one can find a very smooth, lightweight wooden dowel that is close to the bore width of the shotgun, a person can make several types of shotgun− launched weapons. Insert the dowel in the barrel of the shotgun with the shell without the shot in the firing chamber. Mark the dowel about six inches away from the end of the barrel, and remove it from the barrel. Next, decide what type of explosive or incendiary device is to be used. This device can be a chemical fire bottle (section 3.43), a pipe bomb (section 4.42), or a thermit bomb (section 3.41 and section 4.42). After the device is made, it must be securely attached to the dowel. When this is done, place the dowel back in the shotgun. The bomb or incendiary device should be on the end of the dowel. Make sure that the device has a long enough fuse, light the fuse, and fire the shotgun. If the projectile is not too heavy, ranges of up to 300 ft are possible. A diagram of a shotgun projectile is shown below:

```
 ____
||   |
||   |
||   | ----- bomb, securely taped to dowel
||   |
||___|
|| |
|| | ------- fuse
|| |
||
||
||
|| --------- dowel
||
||
||
||
||
|| --------- insert this end into shotgun
```

<−−Primitive proj. weap.**−−>Index<−−**Ammo for comp. gas weap.−−>

5.3 SPECIAL AMMUNITION FOR COMPRESSED AIR/GAS WEAPONS

This section deals with the manufacture of special ammunition for compressed air or compressed gas weapons, such as pump B.B guns, CO2 B.B guns, and .22 cal pellet guns. These weapons, although usually thought of as kids toys, can be made into rather dangerous weapons.

5.31 SPECIAL AMMUNITION FOR B.B GUNS

A BB gun, for this manuscript, will be considered any type of rifle or pistol that uses compressed air or CO2 gas to fire a projectile with a caliber of .177, either B.B, or lead pellet. Such guns can have almost as high a muzzle velocity as a bullet−firing rifle. Because of the speed at which a .177 caliber projectile flies, an impact detonating projectile can easily be made that has a caliber of .177. Most ammunition for guns of greater than .22 caliber use primers to ignite the powder in the bullet. These primers can be bought at gun stores, since many people like to reload their own bullets. Such primers detonate when struck by the firing pin of a gun. They will also detonate if they are thrown at a hard surface at a great speed. Usually, they will also fit in the barrel of a .177 caliber gun. If they are inserted flat end first, they will detonate when the gun is fired at a hard surface. If such a primer is attached to a piece of thin metal tubing, such as that used in an antenna, the tube can be filled with an explosive, be sealed, and fired from a B.B gun. A diagram of such a projectile appears below:

```
      _____ primers _______
     |                     |
     |                     |
     |                     |
     V                     V
   ______                ______
  | ________________________ |-------------------
  | ****** explosive ******* |------------------- } tassel or
  | ________________________ |-------------------   cotton
  |_____                _____|-------------------
             ^
             |
             |
             |_______ antenna tubing
```

The front primer is attached to the tubing with a drop of super glue. The tubing is then filled with an explosive, and the rear primer is glued on. Finally, a tassel, or a small piece of cotton is glued to the rear primer, to insure that the projectile strikes on the front primer. The entire projectile should be about 3/4 of an inch long.

5.32 SPECIAL AMMUNITION FOR .22 CALIBER PELLET GUNS

A .22 caliber pellet gun usually is equivalent to a .22 cal rifle, at close ranges. Because of this, relatively large explosive projectiles can be adapted for use with .22 caliber air rifles. A design similar to that used in section 5.12 is suitable, since some capsules are about .22 caliber or smaller. Or, a design similar to that in section 5.31 could be used, only one would have to purchase black powder percussion caps, instead of ammunition primers, since there are percussion caps that are about .22 caliber. A #11 cap is too small, but anything larger will do nicely.

<−−Ammo for firearms**−−>Index<−−**Rockets and cannons−−>

6.0 ROCKETS AND CANNONS

Rockets and cannon are generally thought of as heavy artillery. Perpetrators of violence do not usually employ such devices, because they are difficult or impossible to acquire. They are not, however, impossible to make. Any individual who can make or buy black powder or pyrodex can make such things. A terrorist with a cannon or large rocket is, indeed, something to fear.

<−−Ammo for comp. gas weap.**−−>Index<−−**Rockets−−>

6.1 ROCKETS

- BASIC ROCKET BOMB
- LONG RANGE ROCKET BOMB
- MULTIPLE WARHEAD ROCKET BOMBS

Rockets were first developed by the Chinese several hundred years before Christ. They were used for entertainment, in the form of fireworks. They were not usually used for military purposes because they were inaccurate, expensive, and unpredictable. In modern times, however, rockets are used constantly by the military, since they are cheap, reliable, and have no recoil. Perpetrators of violence, fortunately, cannot obtain military rockets, but they can make or buy rocket engines. Model rocketry is a popular hobby of the space age, and to launch a rocket, an engine is required. Estes, a subsidiary of Damon, is the leading manufacturer of model rockets and rocket engines. Their most powerful engine, the "D" engine, can develop almost 12 lbs. of thrust; enough to send a relatively large explosive charge a significant distance. Other companies, such as Centuri, produce even larger rocket engines, which develop up to 30 lbs. of thrust. These model rocket engines are quite reliable, and are designed to be fired electrically. Most model rocket engines have three basic sections. The diagram below will help explain them.

```
 __________________________________________________________
|__________________________________________________________| -- cardboard
 \  clay  | - - - - - - - - - - | * * * | . . . .|c|           casing
  \_______|  - - - - - - - - -  | * * * |  . . . |l|
   ______ _ - - - thrust - - -  | smoke | eject  |a|
  / clay  |  - - - - - - - - -  | * * * | . . . .|y|
 /________|_____________________|_______|________|_|_______
|__________________________________________________________| -- cardboard
                                              casing
```

The clay nozzle is where the igniter is inserted. When the area labeled "thrust" is ignited, the "thrust" material, usually a large single grain of a propellant such as black powder or pyrodex, burns, forcing large volumes of hot, rapidly expanding gases out the narrow nozzle, pushing the rocket forward. After the material has been consumed, the smoke section of the engine is ignited. It is usually a slow−burning material, similar to black powder that has had various compounds added to it to produce visible smoke, usually black, white, or yellow in color. This section exists so that the rocket will be seen when it reaches its maximum altitude, or apogee. When it is burned up, it ignites the ejection charge, labeled "eject". The ejection charge is finely powdered black powder. It burns very rapidly, exploding, in effect. The explosion of the ejection charge pushes out the parachute of the model rocket. It could also be used to ignite the fuse of a bomb...

Rocket engines have their own peculiar labeling system. Typical engine labels are: 1/4A−2T, 1/2A−3T, A8−3, B6−4, C6−7, and D12−5. The letter is an indicator of the power of an engine. "B" engines are twice as powerful as "A" engines, and "C" engines are twice as powerful as "B" engines, and so on. The number following the letter is the approximate thrust of the engine, in pounds. the final number and letter is the time delay, from the time that the thrust period of engine burn ends until the ejection charge fires; "3T" indicates a 3 second delay.

NOTE:

An extremely effective rocket propellant can be made by mixing aluminum dust with ammonium perchlorate and a very small amount of iron oxide. The mixture is bound together by an epoxy.

6.11 BASIC ROCKET BOMB

A rocket bomb is simply what the name implies: a bomb that is delivered to its target by means of a rocket. Most people who would make such a device would use a model rocket engine to power the device. By cutting fins from balsa wood and gluing them to a large rocket engine, such as the Estes "C" engine, a basic rocket could be constructed. Then, by attaching a "crater maker", or CO2 cartridge bomb to the rocket, a bomb would be added. To insure that the fuse of the "crater maker" (see section 4.42) ignited, the clay over the ejection charge of the engine should be scraped off with a plastic tool. The fuse of the bomb should be touching the ejection charge, as shown below.

```
         ____________ rocket engine
         |                         _________ crater maker
         |                         |
         |                         |
         V                         |
    _______________________________V_
    |________________________________|   ______________________
     \   | - - - - - -|***|::::|      /# # # # # # # # # # # \
      \__| - - - - - -|***|::::|  ___/  # # # # # # # # # # # \
       __  - - - - - -|***|::::|---fuse--- # #  explosive  # # )
      /  | - - - - - -|***|::::|  ___   # # # # # # # # # # # /
     /___|____________|___|____|____ \_______________________/
    |________________________________|
    thrust> - - - - - -
    smoke>  ***
    ejection charge> ::::
```

Duct tape is the best way to attach the crater maker to the rocket engine. Note in the diagram the absence of the clay over the ejection charge Many different types of explosive payloads can be attached to the rocket, such as a high explosive, an incendiary device, or a chemical fire bottle.

Either four or three fins must be glued to the rocket engine to insure that the rocket flies straight. The fins should look like the following diagram:

```
         |\
         | \
         |  \
         |   \  <--------- glue this to rocket engine
         |    \
         |     \
         |      \
         |       |
         |       |
         |       |
 leading edge    |
  ------->       |
         |       |
         |       |  trailing edge
         |       |    <--------
         |       |
         |       |
         |       |
         |       |
          \_____/
```

The leading edge and trailing edge should be sanded with sandpaper so that they are rounded. This will help make the rocket fly straight. A two inch long section of a plastic straw can be attached to the rocket to launch it from. A clothes hanger can be cut and made into a launch rod. The segment of a plastic straw should be glued to the rocket engine adjacent to one of the fins of the rocket. A front view of a completed rocket bomb is shown below.

```
                   |
 fin               | <------ fin
  |                |           |
  |                |           |
  |              __|__         |
  V             /     \        V
---------------|       |---------------
                \_____/
                   |o <----------- segment of plastic straw
                   |
                   |
                   | <------ fin
                   |
                   |
```

By cutting a coat hanger at the indicated arrows, and bending it, a launch rod can be made. After a fuse is inserted in the engine, the rocket is simply slid down the launch rod, which is put through the segment of plastic straw. The rocket should slide easily along a coathanger, such as the one illustrated below:

```
               ____
              /    \
             |      |
cut here _____      |
              |     |
              |     |
              |    / \
              V   /   \
_________________/     \________________
/                                        \
/                                          \
/____________________________________________\
                     ^
                     |
                     |
     and here ______|
Bend wire to this shape:
               _______ insert into straw
              |
              |
              |
              V
 ____________________________________________
 \
  \
   \
    \
     \  <--------- bend here to adjust flight angle
      |
      |
      |
      |
      |
      | <---------- put this end in ground
      |
```

6.12 LONG RANGE ROCKET BOMB

Long range rockets can be made by using multi−stage rockets. Model rocket engines with an "0" for a time delay are designed for use in multi− stage rockets. An engine such as the D12−0 is an excellent example of such an engine. Immediately after the thrust period is over, the ejection charge explodes. If another engine is placed directly against the back of an "0" engine, the explosion of the ejection charge will send hot gases and burning particles into the nozzle of the engine above it, and ignite the thrust section. This will push the used "0" engine off of the rocket, causing an overall loss of weight. The main advantage of a multi−stage rocket is that it loses weight as travels, and it gains velocity. A multi−stage rocket must be designed somewhat differently than a single stage rocket, since, in order for a rocket to fly straight, its center of gravity must be ahead of its center of drag. This is accomplished by adding weight to the front of the rocket, or by moving the center of drag back by putting fins on the rocket that are well behind the rocket. A diagram of a multi−stage rocket appears below:

```
                    ___
                   /   \
                   |   |
                   | C |
                   | M | ------ CM: Crater Maker
                   |   |
                   |   |
                   |___|
                   |   |
                   |   |
                   |   |
                   | C | ------ C6−5 rocket engine
                  /| 6 |\
                 / | | | \
                /  | 5 |  \
               /   |___|   \ ---- fin
              /   /|   |\   \
             /   / |   | \   \
            /   /  |   |  \   \
           /   /   | C |   \   \
          |   /    | 6 |    \   |
          |  /     | | |     \  |
          | /      | 0 |      \ |
          |/       |___|       \|
          |       /     \       |
          \______/   ^   \______/ ------- fin
                     |
                     |
                     |
                     |
                     C6−0 rocket engine
     The fuse is put in the bottom engine.
```

Two, three, or even four stages can be added to a rocket bomb to give it a longer range. It is important, however, that for each additional stage, the fin area gets larger.

6.13 MULTIPLE WARHEAD ROCKET BOMBS

"M.R.V." is an acronym for Multiple Reentry Vehicle. The concept is simple: put more than one explosive warhead on a single missile. This can be done without too much difficulty by anyone who knows how to make crater−makers and can buy rocket engines. By attaching crater makers with long fuses to a rocket, it is possible that a single rocket could deliver several explosive devices to a target. Such a rocket might look like the diagram on the following page:

```
        ___
       /   \
       |   |
       | C |
       | M |
       |___|
    ___|   |___
    |  |   |  |
    |  | T |  |
   / \ | U | / \
  /   \| B |/   \
  |   || E ||   |
  | C ||   || C |
  | M ||   || M |
  |   ||___||   |
  \___/| E |\___/
       | N |
      /| G |\
     / | I | \
    /  | N |  \
   /   | E |   \
  /    |___|    \
 / fin/  |  \ fin\
|    /   |   \    |
 \__/    |    \__/
         ^
         |____ fin
```

The crater makers are attached to the tube of rolled paper with tape. the paper tube is made by rolling and gluing a 4 inch by 8 inch piece of paper. The tube is glued to the engine, and is filled with gunpowder or black powder. Small holes are punched in it, and the fuses of the crater makers are inserted in these holes. A crater maker is glued to the open end of the tube, so that its fuse is inside the tube. A fuse is inserted in the engine, or in the bottom engine if the rocket bomb is multi stage, and the rocket is launched from the coathanger launcher, if a segment of a plastic straw has been attached to it.

<−−Rockets and cannons**−−>Index<−−**Cannons−−>

6.2 CANNON

- BASIC PIPE CANNON
- ROCKET FIRING CANNON

The cannon is a piece of artillery that has been in use since the 11th century. It is not unlike a musket, in that it is filled with powder, loaded, and fired. Cannons of this sort must also be cleaned after each shot, otherwise, the projectile may jam in the barrel when it is fired, causing the barrel to explode. A sociopath could build a cannon without too much trouble, if he/she had a little bit of money, and some patience.

6.21 BASIC PIPE CANNON

A simple cannon can be made from a thick pipe by almost anyone. The only difficult part is finding a pipe that is extremely smooth on its interior. This is absolutely necessary; otherwise, the projectile may jam. Copper or aluminum piping is usually smooth enough, but it must also be extremely thick to withstand the pressure developed by the expanding hot gases in a cannon. If one uses a projectile such as a CO2 cartridge, since such a projectile can be made to explode, a pipe that is about 1.5 to 2 feet long is ideal. Such a pipe MUST have walls that are at least 1/3 to 1/2 an inch thick, and be very smooth on the interior. If possible, screw an endplug into the pipe. Otherwise, the pipe must be crimped and folded closed, without cracking or tearing the pipe. A small hole is drilled in the back of the pipe near the crimp or endplug. Then, all that need be done is fill the pipe with about two teaspoons of grade black powder or pyrodex, insert a fuse, pack it lightly by ramming a wad of tissue paper down the barrel, and drop in a CO2 cartridge. Brace the cannon securely against a strong structure, light the fuse, and run. If the person is lucky, he will not have overcharged the cannon, and he will not be hit by pieces of exploding barrel. Such a cannon would look like this:

```
           __________________ fuse hole
           |
           |
           V
    ________________________________________________________________
   | |________________________________________________________________|
   |endplug|powder|t.p.| CO2 cartridge
   | ______|______|____|_____________________________________________
   |_|________________________________________________________________|
```

An exploding projectile can be made for this type of cannon with a CO2 cartridge. It is relatively simple to do. Just make a crater maker, and construct it such that the fuse projects about an inch from the end of the cartridge. Then, wrap the fuse with duct tape, covering it entirely, except for a small amount at the end. Put this in the pipe cannon without using a tissue paper packing wad. When the cannon is fired, it will ignite the end of the fuse, and shoot the CO2 cartridge. The explosive−filled cartridge will explode in about three seconds, if all goes well. Such a projectile would look like this:

```
   ___
  /   \
  |   |
  | C |
  | M |
  |   |
  |   |
  |\ /|
  | | | ---- tape
  |_|_|
    |
    | ------ fuse
```

6.22 ROCKET FIRING CANNON

A rocket firing cannon can be made exactly like a normal cannon; the only difference is the ammunition. A rocket fired from a cannon will fly further than a rocket alone, since the action of shooting it overcomes the initial inertia. A rocket that is launched when it is moving will go further than one that is launched when it is stationary. Such a rocket would resemble a normal rocket bomb, except it would have no fins. It would look like this:

```
  ___
 /   \
 |   |
 | C |
 | M |
 |   |
 |   |
 |___|
 | E |
 | N |
 | G |
 | I |
 | N |
 | E |
 |___|
```

the fuse on such a device would, obviously, be short, but it would not be ignited until the rocket's ejection charge exploded. Thus, the delay before the ejection charge, in effect, becomes the delay before the bomb explodes. Note that no fuse need be put in the rocket; the burning powder in the cannon will ignite it, and simultaneously push the rocket out of the cannon at a high velocity.

<−−Rockets**−−>Index<−−**Pyrotech. errata−−>

7.0 PYROTECHNICA ERRATA

There are many other types of pyrotechnics that a perpetrator of violence might employ. Smoke bombs can be purchased in magic stores, and large military smoke bombs can be bought through adds in gun and military magazines. Also, fireworks can also be used as weapons of terror. A large aerial display rocket would cause many injuries if it were to be fired so that it landed on the ground near a crowd of people. Even the "harmless" pull−string fireworks, which consists of a sort of firecracker that explodes when the strings running through it are pulled, could be placed inside a large charge of a sensitive high explosive. Tear gas is another material that might well be useful to the sociopath, and such a material could be instantly disseminated over a large crowd by means of a rocket−bomb, with nasty effects.

<−−Cannons**−−>Index<−−**Smoke bombs−−>

7.1 SMOKE BOMBS

One type of pyrotechnic device that might be employed by a terrorist in many way would be a smoke bomb. Such a device could conceal the getaway route, or cause a diversion, or simply provide cover. Such a device, were it to produce enough smoke that smelled bad enough, could force the evacuation of a building, for example. Smoke bombs are not difficult to make. Although the military smoke bombs employ powdered white phosphorus or titanium compounds, such materials are usually unavailable to even the most well−equipped terrorist. Instead, he/she would have to make the smoke bomb for themselves.

Most homemade smoke bombs usually employ some type of base powder, such as black powder or pyrodex, to support combustion. The base material will burn well, and provide heat to cause the other materials in the device to burn, but not completely or cleanly. Table sugar, mixed with sulfur and a base material, produces large amounts of smoke. Sawdust, especially if it has a small amount of oil in it, and a base powder works well also. Other excellent smoke ingredients are small pieces of rubber, finely ground plastics, and many chemical mixtures. The material in road flares can be mixed with sugar and sulfur and a base powder produces much smoke. Most of the fuel−oxidizer mixtures, if the ratio is not correct, produce much smoke when added to a base powder. The list of possibilities goes on and on. The trick to a successful smoke bomb also lies in the container used. A plastic cylinder works well, and contributes to the smoke produced. The hole in the smoke bomb where the fuse enters must be large enough to allow the material to burn without causing an explosion. This is another plus for plastic containers, since they will melt and burn when the smoke material ignites, producing an opening large enough to prevent an explosion.

<−−Pyrotech. errata**−−>Index<−−**Colored flames−−>

7.2 COLORED FLAMES

Colored flames can often be used as a signaling device for terrorists. by putting a ball of colored flame material in a rocket; the rocket, when the ejection charge fires, will send out a burning colored ball. The materials that produce the different colors of flames appear below.

COLOR	MATERIAL	USED IN
red	strontium salts (strontium nitrate)	road flares, red sparklers
green	barium salts (barium nitrate)	green sparklers
yellow	sodium salts (sodium nitrate)	gold sparklers
blue	powdered copper old pennies	blue sparklers,
white	powdered magnesium or aluminum	firestarters, aluminum foil
purple	potassium permanganate	purple fountains, treating sewage

<−−Smoke bombs**−−>Index<−−**Tear gas−−>

7.3 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

- ring stands (2)
- alcohol burner
- erlenmeyer flask, 300 ml
- clamps (2)
- rubber stopper
- glass tubing
- clamp holder
- condenser
- rubber tubing
- collecting flask
- air trap
- beaker, 300 ml

Materials

- 10 gms glycerine
- 2 gms sodium bisulfate
- distilled water

Procedure

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.

<−−Colored flames**−−>Index<−−**Fireworks−−>

7.4 FIREWORKS

- FIRECRACKERS
- SKYROCKETS
- ROMAN CANDLES

While fireworks cannot really be used as an effective means of terror, they do have some value as distractions or incendiaries. There are several basic types of fireworks that can be made in the home, whether for fun, profit, or nasty uses.

7.41 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−oxidizer 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.

7.42 SKYROCKETS

An impressive home made skyrocket can easily be made in the home from model rocket engines. Estes engines are recommended.

1. Buy an Estes Model Rocket Engine of the desired size, remembering that the power doubles with each letter. (See sect. 6.1 for details)
2. Either buy a section of body tube for model rockets that exactly fits the engine, or make a tube from several thicknesses of paper and glue.
3. Scrape out the clay backing on the back of the engine, so that the powder is exposed. Glue the tube to the engine, so that the tube covers at least half the engine. Pour a small charge of flash powder in the tube, about 1/2 an inch.
4. By adding materials as detailed in the section on firecrackers, various types of effects can be produced.
5. By putting Jumping Jacks or bottle rockets without the stick in the tube, spectacular displays with moving fireballs or M.R.V.'s can be produced.
6. Finally, by mounting many home made firecrackers on the tube with the fuses in the tube, multiple colored bursts can be made.

7.43 ROMAN CANDLES

Roman candles are impressive to watch. They are relatively difficult to make, compared to the other types of home−made fireworks, but they are well worth the trouble.

1. Buy a 1/2 inch thick model rocket body tube, and reinforce it with several layers of paper and/or masking tape. This must be done to prevent the tube from exploding. Cut the tube into about 10 inch lengths.
2. Put the tube on a sheet of wax paper, and seal one end with epoxy and the drying agent. About 1/2 of an inch is sufficient.
3. Put a hole in the tube just above the bottom layer of epoxy, and insert a desired length of water proof fuse. Make sure that the fuse fits tightly.
4. Pour about 1 inch of pyrodex or gunpowder down the open end of the tube.
5. Make a ball by powdering about two 6 inch sparklers of the desired color. Mix this powder with a small amount of flash powder and a small amount of pyrodex, to have a final ratio (by volume) of 60% sparkler material / 20% flash powder / 20% pyrodex. After mixing the powders well, add water, one drop at a time, and mixing continuously, until a damp paste is formed. This paste should be moldable by hand, and should retain its shape when left alone. Make a ball out of the paste that just fits into the tube. Allow the ball to dry.
6. When it is dry, drop the ball down the tube. It should slide down fairly easily. Put a small wad of tissue paper in the tube, and pack it gently against the ball with a pencil.
7. When ready to use, put the candle in a hole in the ground, pointed in a safe direction, light the fuse, and run. If the device works, a colored fireball should shoot out of the tube to a height of about 30 feet. This height can be increased by adding a slightly larger powder charge in step 4, or by using a slightly longer tube.
8. If the ball does not ignite, add slightly more pyrodex in step 5.
9. The balls made for roman candles also function very well in rockets, producing an effect of falling colored fireballs.

<−−Tear gas**−−>Index<−−**Suppliers and info−−>

8.0 LISTS OF SUPPLIERS AND MORE INFORMATION

Most, if not all, of the information in this publication can be obtained through a public or university library. There are also many publications that are put out by people who want to make money by telling other people how to make explosives at home. Adds for such appear frequently in paramilitary magazines and newspapers. This list is presented to show the large number of places that information and materials can be purchased from. It also includes fireworks companies and the like.

COMPANY NAME AND ADDRESS	WHAT COMPANY SELLS
FULL AUTO CO. INC. P.O. BOX 1881 MURFREESBORO, TN 37133	EXPLOSIVE RECIPES, PAPER TUBING
UNLIMITED BOX 1378-SN HERMISTON, OREGON 97838	CHEMICALS AND FUSE
AMERICAN FIREWORKS NEWS SR BOX 30 DINGMAN'S FERRY, PENNSYLVANIA 18328	FIREWORKS NEWS MAGAZINE WITH SOURCES AND TECHNIQUES
BARNETT INTERNATIONAL INC. 125 RUNNELS STREET P.O. BOX 226 PORT HURON, MICHIGAN 48060	BOWS, CROSSBOWS, ARCHERY MATERIALS, AIR RIFLES
CROSSMAN AIR GUNS P.O. BOX 22927 ROCHESTER, NEW YORK 14692	AIR GUNS
EXECUTIVE PROTECTION PRODUCTS INC. 316 CALIFORNIA AVE. RENO, NEVADA 89509	TEAR GAS GRENADES, PROTECTION DEVICES
BADGER FIREWORKS CO. INC. BOX 1451 JANESVILLE, WISCONSIN 53547	CLASS "B" AND "C" FIREWORKS
NEW ENGLAND FIREWORKS CO. INC. P.O. BOX 3504 STAMFORD, CONNECTICUTT 06095	CLASS "C" FIREWORKS
RAINBOW TRAIL BOX 581 EDGEMONT, PENNSYLVANIA 19028	CLASS "C" FIREWORKS
STONINGTON FIREWORKS INC. 4010 NEW WILSEY BAY U.25 ROAD	CLASS "C" AND "B" FIREWORKS

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RAPID RIVER, MICHIGAN
49878
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WINDY CITY FIREWORKS INC. P.O. BOX 11 ROCHESTER, INDIANNA 46975	CLASS "C" AND "B" FIREWORKS (GOOD PRICES!)

BOOKS

- THE ANARCHIST'S COOKBOOK
- THE IMPROVISED MUNITIONS MANUAL
- MILITARY EXPLOSIVES
- FIRES AND EXPLOSIONS

<−−Fireworks**−−>Index<−−**Checklist for labraids−−>

9.0 CHECKLIST FOR RAIDS ON LABS

In the end, the serious terrorist would probably realize that if he/she wishes to make a truly useful explosive, he or she will have to steal the chemicals to make the explosive from a lab. A list of such chemicals in order of priority would probably resemble the following:

Important liquids

- Nitric Acid
- Sulfuric Acid
- 95% Ethanol
- Toluene
- Perchloric Acid
- Hydrochloric Acid

Important Solids

- Potassium Perchlorate
- Potassium Chlorate
- Picric Acid (usually a powder)
- Ammonium Nitrate
- Powdered Magnesium
- Powdered Aluminum

Less important chemicals

- Potassium Permanganate
- Sulfur
- Mercury
- Potassium Nitrate
- Potassium Hydroxide
- Phosphorus
- Sodium Azide
- Lead Acetate
- Barium Nitrate

<−−Suppliers and info**−−>Index<−−**Pyrochemistry−−>

10.0 USEFUL PYROCHEMISTRY

In general, it is possible to make many chemicals from just a few basic ones. A list of useful chemical reactions is presented. It assumes knowledge of general chemistry; any individual who does not understand the following reactions would merely have to read the first five chapters of a high school chemistry book.

- potassium perchlorate from perchloric acid and potassium hydroxide

$$K(OH) + HClO_4 \longrightarrow KClO_4 + H_2O$$

- potassium nitrate from nitric acid and potassium hydroxide

$$\text{"} + HNO_3 \longrightarrow KNO_3 + \text{"}$$

- ammonium perchlorate from perchloric acid and ammonium hydroxide

$$NH_3OH + HClO_4 \longrightarrow NH_3ClO_4 + \text{"}$$

- ammonium nitrate from nitric acid and ammonium hydroxide

$$NH_3OH + HNO_3 \longrightarrow NH_3NO_3 + \text{"}$$

- powdered aluminum from acids, aluminum foil, and magnesium

A. $\text{aluminum foil} + 6HCl \longrightarrow 2AlCl_3 + 3H_2$

B. $2AlCl_3\,(aq) + 3Mg \longrightarrow 3MgCl_2\,(aq) + 2Al$

The Al will be a very fine silvery powder at the bottom of the container which must be filtered and dried. This same method works with nitric and sulfuric acids, but these acids are too valuable in the production of high explosives to use for such a purpose, unless they are available in great excess.

<−−Checklist for labraids**−−>Index<−−**About the author−−>

11.0 ABOUT THE AUTHOR

The author, who wishes his name to be unknown, is presently attending a college in the United States of America, majoring in Engineering. He was raised by his parents on the East Coast, and received his high school education there. He first became interested in pyrotechnics when he was about eight years of age. At age twelve, he produced his first explosive device; it was slightly more powerful than a large firecracker. He continued to produce explosive devices for several years. He also became interested in model rocketry, and has built several rockets from kits, and designed his own rockets. While in high school, the author became affiliated with CHAOS, and eventually became the head of Gunzenbomz Pyro−Technologies. At this time, at age 18, he produced his first high explosive device, putting a 1 foot deep crater in an associate's back yard. He had also produced many types of rockets, explosive ammunition, and other pyrotechnic devices. While he was heading Gunzenbomz Pyro− Technologies, he was injured when a home made device exploded in his hand; he did not make the device. The author learned, however, and then decided to reform, and although he still constructs an occasional explosive device, he chooses to abstain from their production. An occasional rocket that produces effects similar to that of professional displays can sometimes be seen in the midnight sky near his college, and the Fourth of July is still his favorite day of the year.

Pax et Discordia,

the Author

HERE ENDS THE FIRST PUBLICATION OF THE TERRORIST'S HANDBOOK. THIS IS THE ONLY AUTHORIZED PUBLICATION, AND THE SOLE PRODUCTION RIGHTS BELONG TO CHAOS INDUSTRIES AND GUNZENBOMZ PYRO−TECHNOLOGIES.

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<−−Pyrochemistry**−−>Index<−−**