

MISSILES

SMALL, INEXPENSIVE, POWERFUL,
ACCURATE, FAST, EASY TO MAKE.

ALL MATERIALS CAN BE BOUGHT FROM OUR NEIGHBORHOOD WALMART
STORE OR OTHER HOBBY, GROCERY, LIQUOR, ETC STORE...

MATERIALS NEEDED: EMPTY CO2 CARTRIDGES, 2-3 BOXES OF RED
MATCHES(NOT WHITE), CANNON FUSE OR ELECTRIC MODEL ROCKET
IGNITORS, PROPANE TORCH, SOLDER WITH FLUX, COPPER PIPES THE SAME
DIAMETER AS A CO2 OR SLIGHTLY LARGER, STEEL PIPE THAT IS BIG
ENOUGH FOR THE CO2 TO SLIDE FREELY INSIDE IT, OTHER WIRING OR
HARNESSING TO MAKE IT A PORTABLE MISSILE LAUNCHER.

PREPARING MATERIALS TO BUILD IT:

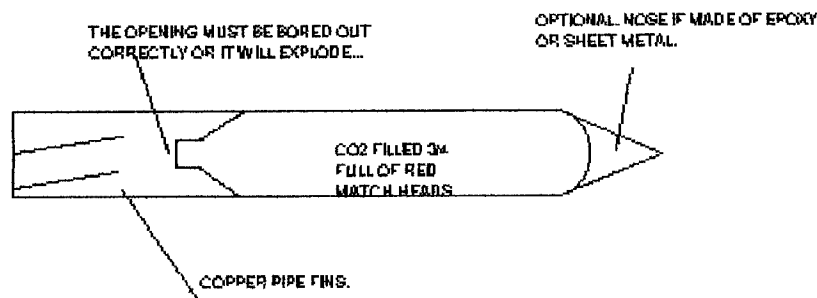
1. CUT ALL THE HEADS OFF THE MATCHES. THEY MUST BE THE RED
TYPE, THE WHITE ONES MAKE IT EXPLODE. PLACE THEM IN A DRY
PLACE.
2. CUT THE TOP OF THE CO2 CARTRIDGE OFF AND BORE OUT THE HOLE
TO ABOUT 1 ½ SIZE OF A BB.
3. FORM THE COPPER FINS BY CUTTING AN X IN THE PIPE WITH A HACK
SAW OR TIN SNIPPERS. SLIP THE PIPE OVER THE CO2 AND SOLDER IT IN
PLACE.
4. LET IT COOL DOWN AND FILL IT ¾ FULL OF RED MATCH HEADS,
LOOSELY NOT PACKED. PLACE THE FUSE IN PLACE AND SEAL THE
HOLE WITH HOT GLUE.
5. FROM THE X YOU CUT IN THE PIPE YOU MUST TURN EACH FIN INWARD
SO THAT ONE EDGE IS FACING THE CENTER, DO THIS WITH ALL 4 OF
THEM...THIS WILL CAUSE THE MISSILE TO SPIN ALSO ADDING TO ITS
DESTRUCTIVE POWER. BEND EACH FIN OUTWARD SO THE HOLE IN THE
CENTER OF THE CO2 IS EXPOSED.
6. FORM A NOSE CONE OUT OF EITHER SHEET METAL OR EPOXY. THIS IS
NOT REQUIRED BUT WILL INCREASE YOUR RANGE AND ACCURACY BY
5 FOLD.

REMEMBER THAT EVERY PART OF THIS MISSILE MUST BE BUILT SO IT

CAN HANDLE THE SPEED OF SOUND, IF IT IS NOT IT WILL BE DESTROYED IN MID FLIGHT OR AT TAKEOFF. SOMETIMES IT HELPS TO PAINT THE ENTIRE MISSILE WITH A HARD EPOXY PAINT TO MINIMIZE RESISTANCE AND TO HELP LUBRICATE IT FROM THE AIR.

LOGISTICS OF OUR MISSILES FROM 5 YEARS AGO:

- 1 TAKEOFF SPEED FROM 0-1457FPS
- 2 FINAL VELOCITY AT ¼ MILE WAS 1578FPS
- 3 IMPACT DAMAGE TO 2 INCHES OF PLYWOOD AT ¼ MILE....IT PUNCHED OUT A PERFECT HOLE IN IT.
- 4 IMPACT DAMAGE TO A FORD TEMPO CAR DOOR AT ¼ MILE...IT WENT THROUGH THE FIRST DOOR AND WAS DEFRACATED THROUGH THE PASSENGER WINDOW AND WAS NOT RECOVERED.
- 5 IT WAS NOTED THAT IF THE MISSILE IS NOT EMPTY OF IT'S FUEL WHEN IT HITS A TARGET IT WILL EXPLODE UPON IMPACT WITH DAMAGING SHRAPNEL FLYING THROUGH THE AIR.
- 6 THE MISSILE ARE EXTREMELY RIGID AND ARE NOT SHOCK SENSITIVE.
- 7 OUT OF 10 TEST TRIALS WE HAD 1 EXPLODE BECAUSE THE HOLE WAS TOO SMALL. YOU MUST BORE THE HOLE OUT LARGER THAN 1 ½ BB'S.



IT IS IMPORTANT THAT YOU MAKE THE FINS OR THE CO2 MAY NOT TRAVEL STRAIGHT... WE HAVE HAD TEST THAT SHOWED THAT THEY DID TRAVEL STRAIGHT WITHOUT THE FINS. IT'S YOUR CHOICE. FINS GIVE IT A LOT MORE RANGE AND ACCURACY.

WE HAVE INCLUDED A HAND DRAWN DIAGRAM ALSO OF THE FINS. IT'S REALLY HARD TO DRAW THEM ON PAPER. THE MISSILE WILL SPIN VERY FAST FROM THE FIN INTERACTION WITH THE EXPELLED GASES.

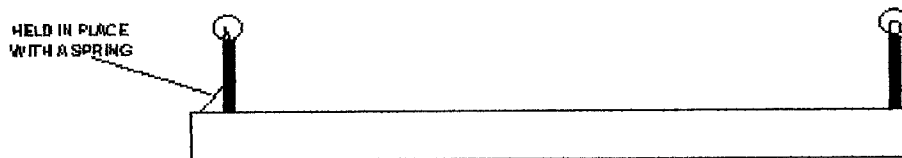
THE LAUNCHING SYSTEM IS COMPOSED OF A STEEL TUBE WHICH IS OPEN ENDED OR SLIGHTLY AIR RESTRICTED TO ALLOW FOR EXTRA PUSH.

TAKE NOTE: IN OUR RESEARCH WE PLACED AN ENDCAP ON THE STEEL PIPE AND DRILLED A HOLE THAT WAS THE SAME SIZE AS THE END NIPPLE OF THE CO2. WHEN WE FIRED IT, IT SNAPPED OUR C CLAMP IN HALF. IMAGINE HOLDING IT IN YOUR HANDS. YOU MUST DRILL A HOLE 3 TIMES OR LARGER THE SIZE OF THE NIPPLE. IT IS ALSO BETTER TO DOUBLE THE THICKNESS OF THE PIPE OR USE TRIPPLE PLY TITANIUM (WE OFFER THIS OCCASIONALLY). THE TRIGGER SYSTEM WILL GENERALLY BE MADE FROM A SMALL BATTERY PACK CONNECT IN SERIES WITH A TRIGGER SWITCH. THE TWO WIRES WILL THEN BE CONNECTED TO A SAFETY SWITCH AND THEN TO AN ELECTRIC IGNITOR OR COIL OF NICHROME WIRE TO IGNITE THE FUSE.

MAKE SURE THE SAFETY WORKS OR YOU WILL GET HURT. ONE OF OUR ASSOCIATES ALMOST LOST AN EAR FROM SCHRAPNEL.

AIMING SYSTEM AND TARGET ACQUISITION:

YOU CANNOT USE A LASER AIMING SYSTEM, IT WILL BE DESTROYED FROM SHOCK. USE A POINT TO RING SIGHT SYSTEM. IT MUST BE EXTENDED MORE THAN 6 INCHES FROM THE SIDES OF THE PIPE.



HELD IN PLACE WITH A SPRING SO IT WILL NOT GIVE YOU A BLACK EYE.

DO NOT USE OIL OR ANY PETROLEUM PRODUCT TO LUBRICATE THE PIPE. IT WILL BURST INTO FLAME OR EXPLODE.

WE CAN SUPPLY SOME OF THE PARTS FOR BUILDING THESE:

IT MAY BE ILLEGAL TO MAKE OR USE THESE MISSILES OR ONES SIMILAR TO THEM...CHECK YOUR LOCAL OR STATE LAWS BEFORE MAKING OR USING ANY MISSILES OR ROCKETS.

EMPTY CO₂'S X12 (SPECIALLY HEAT TREATED TO RESIST BURSTING) \$23.00

ELECTRIC IGNITORS X12 (SEALED WITH SILICON FOR INSTANT USE) \$20.00

BATTERY PACK, SWITCH, SAFETY SWITCH, WIRING FOR TRIGGER, ETC.. \$22.00

SHIPPING IS \$2.00 PER ITEM. CO₂'S ARE \$4.00 SHIPPING.

FOR TITANIUM PIPING CALL FOR AVAILABILITY...760-639-5527...LEAVE MESSAGE.

