

Casting Lead Throwing Weights

By G8MNY

(new Jul 09)

(8 Bit ASCII graphics use code page 437 or 850)

The other day setting up an HF aerials for a club demo station, I broke one of my lead throwing weights after it hit concrete ground too hard.....

TWIRLING (Slingless shot)

This method uses stronger line & heavier weight. A weight > 100gm, e.g. a 200gm plumb bob is tied to nylon cord (make sure the fixing is very good & will not pull out!) & you whirl this around in a vertical manner in line with the target with a metre or so of line. Your hand needs protection & a leather glove must be worn. As there is danger of 'miss fire' is you let go at the wrong time, make sure other people & cars etc. are well clear!

M E D I U M	twirl dia	
S I Z E D	. r .	Your strength timing & skill
T R E E	. o.	are more important. Make sure
	v ()/' . \.	the line is going to pay out
	. + . ^ \.	freely & that you are not
	/ \	going to get entangled.
	Line laid out	

I have put lines into trees at 18M with this method. Due to the heavy weight, tree grabbing of the line is not a problem, except for miss fires where the shot has to be pulled out from the wrong branch etc. In that case beware of knotting the cord around a branch!

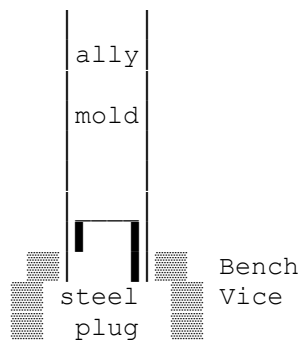
Often a high shot is best coming down in the tree if you can't reach the other side of the tree!

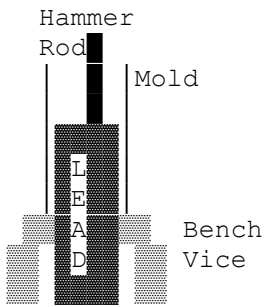
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The original weight was 1.5cm square cross section 4cm long with point ends & had an embedded copper looped end, This soon came out, so I drilled a hole..



And of course this is where it broke.

So I had to recast the lead weight, but what could I use a mold? I found a piece of spare ally aerial boom was just the right size, but it need one end temporally blocked up. This I did with some a steel plate, folded & ground to make a good tight fit.





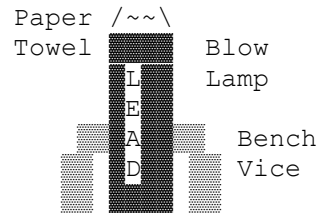
Holding the lead remains in pliers I heated them with a blow lamp & let them drip molten lead into the mold. When cool, I removed the steel plug, but found the lead was well stuck the mold. I hammed it out with the vice support just the mold edge.

However the 1st attempt was poor with the cold lead not bonding well & little bit came out, not 1 strong solid piece!

For the 2nd attempt I warmed the mold up as I melted the scrap bits & also added solder flux, this encouraged the molten lead casting to adhere to itself better.

I repeated the previous removal scheme but used a much bigger punch rod so as not to flatten (wedge) the lead in the mold. I found centre of the piece looked good, but the ends were poor. As I wanted rounded end (to slip through trees easily) I went about hot reshaping the ends.

The trick I soon found was to judge the temperature were the lead was just soft enough to push around, but not drip off. The thick paper towel was OK for this unless you got it in the flame! Once in shape, smoothing off the surface was just a quick pass of the hot frame to just wet the surface.



I was pleased with the result, not a masterpiece, but good & strong enough to take another drilled hole & possibly a few more drops onto concrete!

See my TECH bul on "Tree Antenna Sky Hooks"

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73 De John, G8MNY @ GB7CIP