

Homebuilt Reloading Stand

As designed and adapted 2003-2004 by Erik Prestmo.



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Many reloaders experience a little lack of space when they start reloading. Modern homes often lack space, or a separate room that will allow the home loader to leave everything as is, until the next session.

Modern home furniture is also far too weak to really be used as a foundation for a reloading press. The dimensions simply is not there in a modern table, to support a reloading press, there's a definitive lack of strength.

So in order to fill these two, sometimes conflicting demands, preserve space and supply ample strength, I decided to make my own, personalized reloading stands. They are modelled after a stand that Lyman used to sell, and some simpler, and probably less strong stands, the drawings available on the net.

I based my design on lumber used in building homes, and available all over the globe, more or less: I choose 2 dimensions, 2"x6" and 2"x8" and used heavy screws fixing the various pieces together.

I made two different designs, one adapted to working on top of an ordinary kitchen table, the idea is that the sheer footprint of the stand disperses the forces involved over a large enough area, so that the table does not break down. The other design is adapted to working on the kitchen floor, sitting on an ordinary kitchen chair, otherwise, they are similar in design and workmanship.

A little teasingly I have named the smaller one "El Kapitan", the larger is jokingly known as "El Komodore".

Below I will supply a cut-list, simple drawings and photographs, both during construction, set-up, use and I will point out necessary changes that came to light during the set-up.



Table-top model, "El Kapitan"

The prototype El Kapitan model as shown above is both hell-for-strong, will take anything, probably up to and including bullet swaging, what limits this design is not the strength in the stand, but the amount of down-force the operator is able to supply, in order to get the cases OUT of the dies.

One small problem surfaced in testing this model, using single stage presses, like the cheap and cheerful "**Lee Challenger**", the handle proved to be too long, so that it was not possible to get a full stroke, limiting the amount of force applied on the top of the stroke.

The design was easily corrected as will be shown in pictures of the finished design, the height in the stand was about 2" too low. This was corrected in the prototype simply by screwing down another 8"x12" Top Plate on top of the one already installed, and sawing off a portion of the Foot Plate, making room for the press handle to function.

In the future models, this problem is corrected once and for all, by lengthening the risers, known as Tiedowns and Sideburns, by 2" to 2.5".

El Kapitan, cut-list

1 ea Foot Plate (2"x8") 700mm long – (2"x8") 27.5" long
1 ea Top Plate (2"x8") 350mm long – (2"x8") 13.75" long
3 ea Tie-Downs (2"x6") 225mm long – (2"x8") 9" long

2 ea Sideburns (2"x8") 315mm long – (2"x8") 12.4" long

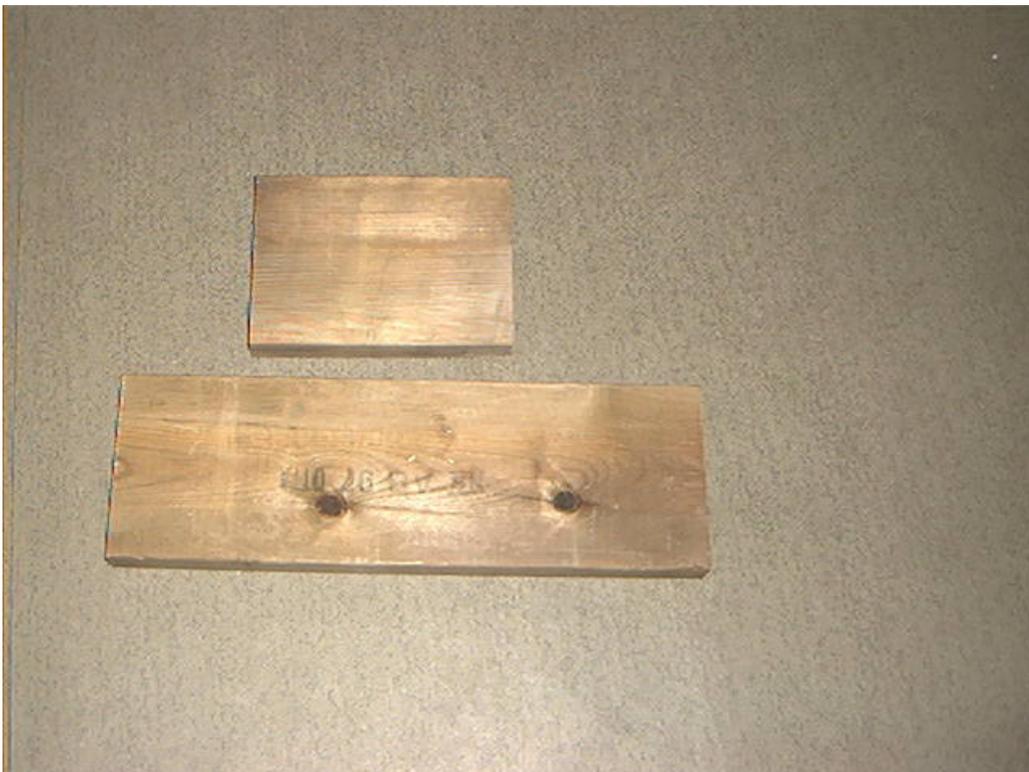
If needed due to stability requirements (none discovered so far): 2 ea Whiskers (2"x6")
350mm long - (2"x6") 13,75" long

Attaches to the bottom outside of the Sideburns, for added stability.

To fix the wood parts together, use 30 screws, 5mm dia. 65mm long (3/16", 2.5" long)

All cuts are very simple, use a ruler, and make a straight, 90 degree cut.

All the pieces are assembled by way of straight wood screws, that are sunk in to get a good grip. I used 65mm screws, of a general type used to construct patios and such-like over here, you get what seems appropriate.



Foot Plate and Top Plate, 2"x8", 27.5" and 13,75" long.



Sideburns and TieDowns, 2"x8" 12.4" and 9" long



First prototype had an extra Sideburn in the back.
This picture show the general layout of the parts.



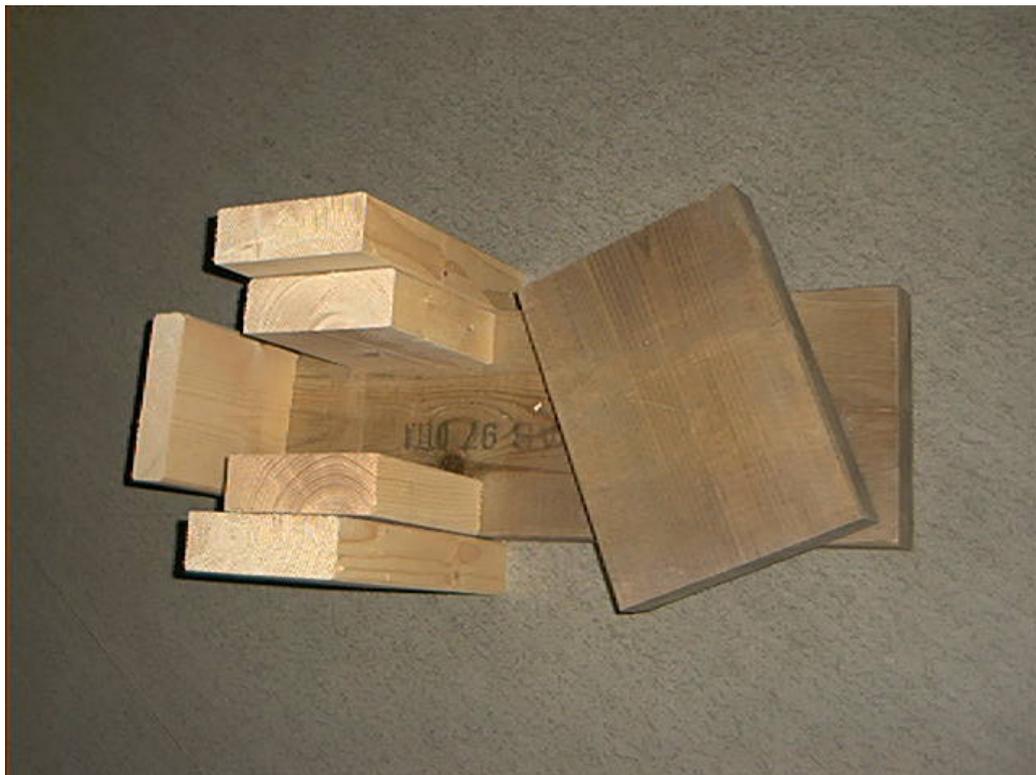
Another view of the layout of the parts.



Close-up of the back end of the early prototype, this design really proved too much, it is unnecessary strong and hence, too heavy.



The finished early prototypes



The simpler next design, parts generally in place, ready to be screwed down.

Construction of the tabletop stand

Start with the Foot Plate, mark the front end of the Sideburns on each side, 300mm from the backend. This will be the front of the Sideburns.

Hold one of the sideburns in place, put one of then TieDowns in place on the inside of the Sideburn. Make sure both are parallel and mark the top of the TieDown on the side of the Sideburn.

Use 4 screws to fix the Tiedowns to the Sideburn, make sure the top of the Tiedowns matches the line inscribed. To ensure that the screws really fixes both together, drill 4 holes about 8mm in dia., about ¾” (20mm), so the screw sinks into the wood.

Repeat this procedure for the other Sideburn/Tiedown combo.



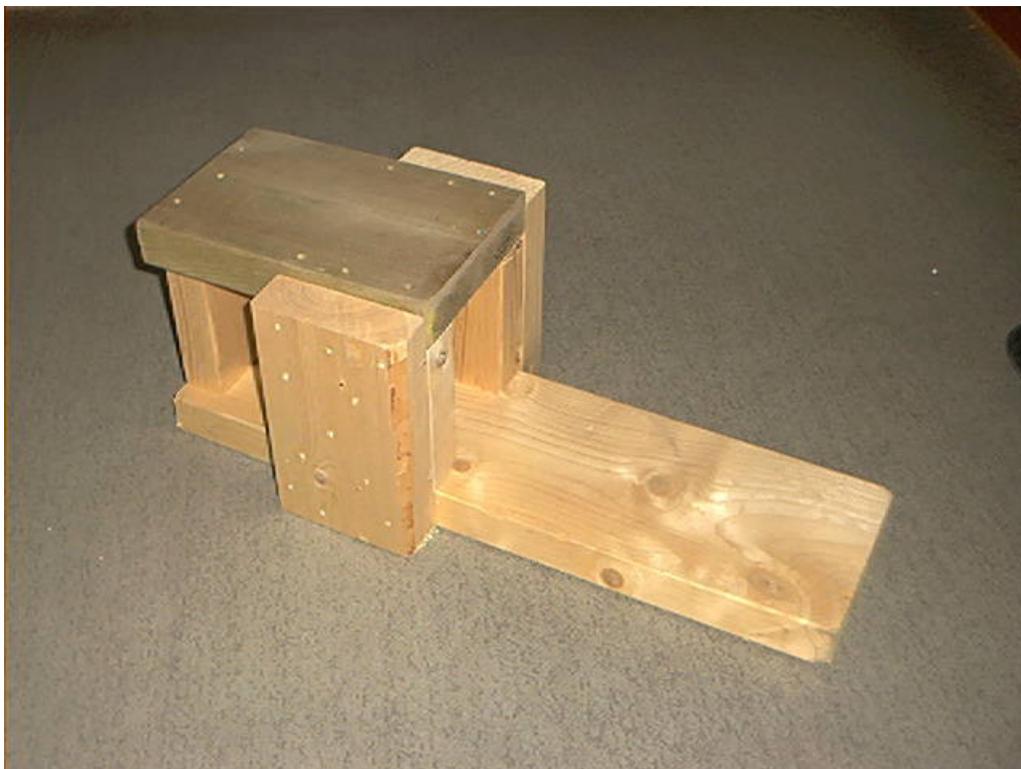
Picture shows Sideburn/TieDowns in place, back TieDown not fixed yet.

Now, fix the TieDowns on each side with another four screws, counter-sunk like the rest, screwed in from the outside, this way the TieDowns are fixed to the Sideburns with 4 screws from each side.

Now, fix the sideburns in the position marked on the Foot Plate, one on each side with three screws each, from either side.

Turn the stand over make it stand on the Sideburns and fix both of the TieDowns from the bottom with two countersunk screws each.

Now is the time to fix the Top Plate to the TieDowns with 3 screws each.



Finally the backend TieDown is gently inserted, and fixed, top and bottom with 3 screws from either side.

The tabletop El Kapitan is now ready to accept a press on the top front of the Top Plate!

During the test phase, involving a Lee Precision Challenger O-frame press, we experienced some slight difficulties.

First off : our Sideburns and TieDowns was about 2" shorter than the measures given here, so the model pictured here are about 2" lower than the finished article.

This gives rise to the problem of short-stroking the press handle. Short stroking is not something we want.

On the pictured press this was fixed by two things: we simply elevated the Top Plate by cutting another one, fixing it with 5 screws. This gives a bit longer stroke, then we cut off a bit of the right front of the Foot Plate, at about 60 degree angle, tilted the saw at about 60 degree angle at the same time.



This quick and easy fix allowed us to work with the tabletop set-up with no problems at all, we was able to use a Lee Challenger, A Lee Turret and a Lee Pro 1000 with this set-up. As a special we set up Lee Challenger presses, and used Lee AutoMator kits to convert the press into a Lee Pro 1000 configuration.

The tabletop stand in its present configuration should work with about any press on the market, save for the biggest progressive presses, that both involves more force and needs a bit more space than their earlier brethren.

The front cut-out needs to be addressed separately: one will have to do an Ad Hoch adaptation to the press one decides to use, to make sure everything works as planned. As we do not have access to all types of presses out there, we have no way of making sure this WILL work with anything as advertised, but we feel sure the stand can be adapted, both with another top to elevate by another 2", and by adapting the front cut as outlined above.



El Komodore, cut-list

1 ea Foot Plate (2"x8") 850mm long – (2"x8") 33.5" long
1 ea Top Plate (2"x8") 350mm long – (2"x8") 13.75" long
3 ea Tie-Downs (2"x6") 510mm long – (2"x8") 20" long
2 ea Sideburns (2"x8") 620mm long – (2"x8") 24.4" long

If needed due to stability requirements (none discovered so far): 2 ea Whiskers (2"x6") 350mm long - (2"x6") 13,75" long
Attaches to the bottom outside of the Sideburns, for added stability.

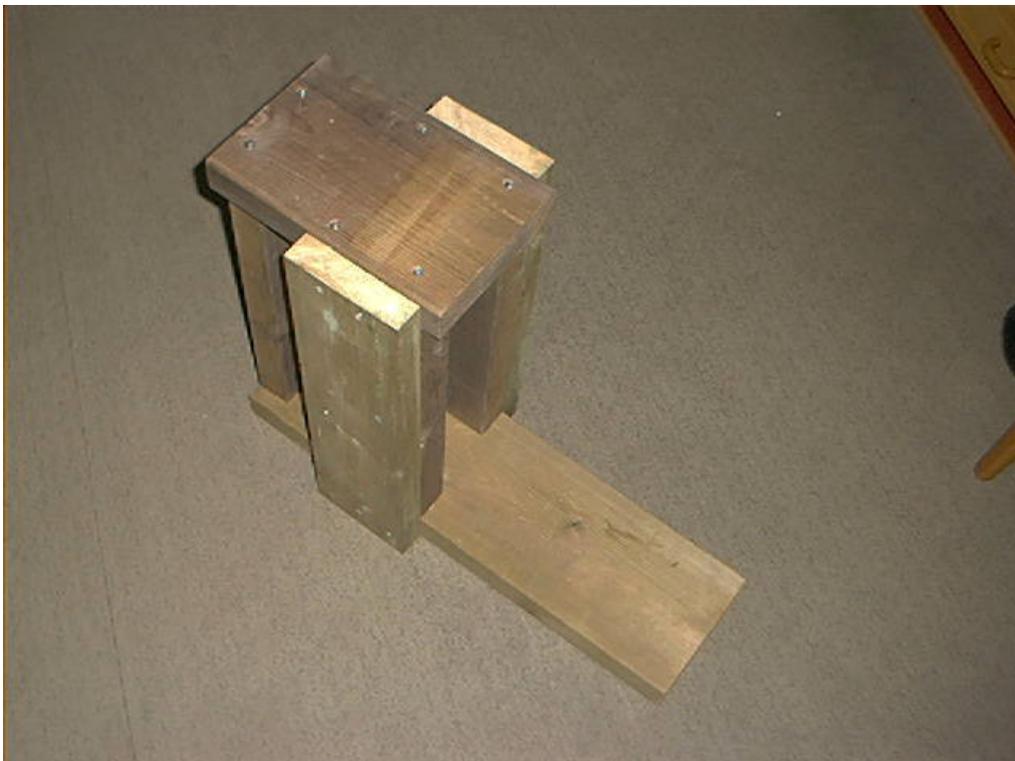
To fix the wood parts together, use 30 screws, 5mm dia. 65mm long (3/16", 2.5" long)

All cuts are very simple, use a ruler, and make a straight, 90 degree cut.

All the pieces are assembled by way of straight wood screws, that are sunk in to get a good grip. I used 65mm screws, of a general type used to construct patios and such-like over here, you get what seems appropriate.

Construction

Refer to the construction of the table-top model, the only difference is the length of the Sideburns and the TieDowns, the construction is the same



Assembled floor model, "El Komodore".



The “El Komodore” next to an ordinary kitchen chair.

The floor model is set-up to fit the working height of your ordinary chair, if your chairs differ, please adjust measurements!

In my house the chairs stand approximately 450mm to the seat, that is close to 17.5”, leaving the stand at approximately 24” seems to give a good working height, with a good oversight of the different processes of a progressive loading press

The working mode is sitting next to the stand, one foot on the Foot Plate, racking the handle back and forth at your convenient speed. The stand gives ample support on the down-stroke, and by way of the operator’s foot on the stand, there is enough power holding the press back so the cases comes easily out of the sizer die.

Used as a base for the big progressive presses.

This stand is hell for strong, stable and easy to put into a suitable closet. It is stable enough to cope with the Lee Loadmaster, which is reported to NOT work on any bench that flexes just a little. This stand does not flex at all, it is like it was made out of solid steel. I use it for Lee Pro 1000, RCBS Rock Chucker, RCBS Rock Chucker with attached Auto.

Pictures of the finished stand, presses ready to go.



Lee Challenger press, ready to be used as single stage press.

Note that the stand has been upgraded with an extra Top Plate, to elevate the press, so we have room for the lever, this extra top plate and the cut out was the only modification necessary. The planned extra set of Whiskers proved not necessary on the low table top stand, and when working with the Lee Challenger single stage press. This might prove different with another manufacturers model. Only practical experience will prove this.



The Lee 2001 Challenger press ca 1984, with added AutoMator kit.

The AutoMator kit rebuilds a single stage press, any single stage press from any manufacturer to a progressive press. The kits are still in limited supply from Lee, and they work about as well, and in similar fashion to the Lee Pro 1000 progressive press.

Note the lever on this early 2001 Challenger single-stage press. This lever can be more easily adapted in its working angle that today's Challenger model. Refer to the previous picture. These original parts have been exchanged by Lee, no doubt the present design is cheaper to produce. It is certainly cheaper all over also. Lee might still have spare parts from the old design available, in case anyone WANTS them.

The old lever really makes the front adaptation superfluous, but this was already done here.



The floor stand with Lee Turret press, ready to go, note the attachments.



Details of the attachments and the exchangeable press mounts, the press fastens to the mount with 3 short 1/4" screws, the mount itself by 4 wood screws.



Compare the older Lee 2001 Challenger press to the left, and the current model, Lee Challenger to the right. It is plainly visible that the lever of the earlier press is easy to adjust, the new model offers just two positions.



Compare the levers and the link toggles of old and new model. The early model was more flexible, more expensive to make.

The additional Whiskers.

During development stages it was proposed to add Whiskers, to give increased sideways support to the stand and press.

It was envisaged that operating the press would require such force that the entire operation would render the stand very wobbly.

Practical experience has so far ruled out this entirely for the smaller, shorter table top stand, the “El Kapitan”. This stand is very stable and does not seem to require any additional support.

What little experience there is with the floor stand, the “El Komodore”, so far has shown no need for additional support. This might prove differently with presses of other manufacturers, so we offer a sample picture here to show the proposed additional support:



Proposed Whisker, additional sideways support. Fixed to give good support to floor or table, by way of at least 5 screws. This should really make these stands strong as cast-iron supports!

Let me rephrase that, these stands are already strong as cast-iron supports. They are virtually impossible to destruct. They are stable and easy to work with, while still, they are easy to stow away in for instance a cupboard, when not needed for the moment.

Adding the proposed Whiskers, will give a little better stability, whether that is desired, each builder must decide for oneself. The added Whiskers will take a little more space in the cupboard, add a little weight, while adding little if anything to the Stands functionality.

Good luck with your project!