

L-HD Launch Box

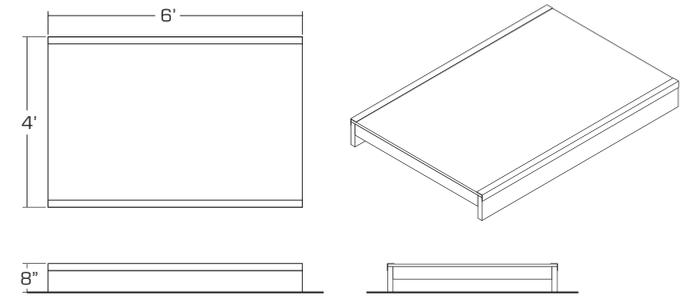
L-HD is shorthand for Lowes - Home Depot. This box has been specifically designed using materials that are readily available at both big-box hardware stores; most notably the angle iron - which can only be bought in 6' lengths instead of 8'.

DISCLAIMER
The purchasers and users understand and accept full responsibility for materials and construction of this product. Purchasers and users understand that skateboarding, BMX biking, rollerblading, rollerskating and similar activities may be hazardous and assumes full responsibility for use of this product. Purchasers and users agree and waive Ramp Plans Online and ccDesign from and against any claim or expense related to this product including personal injuries, medical expenses, attorney's fees, or any other related fees. Ramp Plans Online and ccDesign are also not responsible for injuries or harm incurred due to improper construction, improper use of tools and materials during assembly, alteration of the assembly materials or instructions.

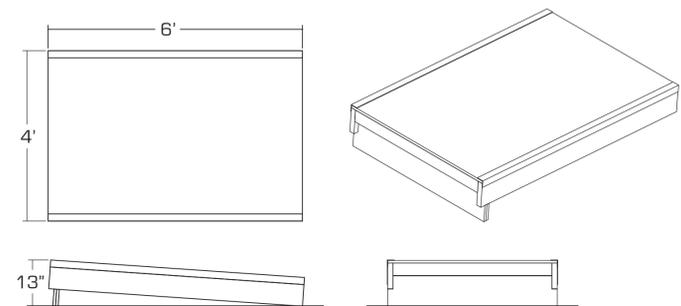
Introduction

scale: 1/2" = 1'

The L-HD Launch Box can be used in two ways: as a flat box, or as a launch box. First you will start by making the flat box. Once it is complete, you can build a riser that fits securely underneath one end converting the box to a high-low, or launch box. Once built, the riser can be added and removed without any hardware! Ride the box flat or ride the box launched, it's like having two ramps in one!



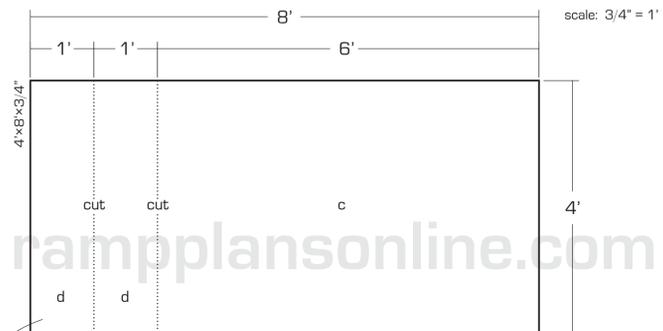
The L-HD Flat Box Configuration



The L-HD Launch Box Configuration

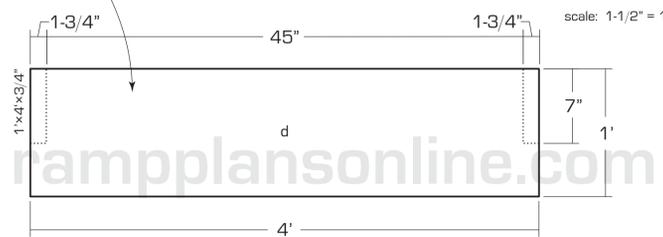
Step 1

scale: VARIES



Required for launch box configuration. If NOT building launch box configuration, cut section "c" and move on to step 4.

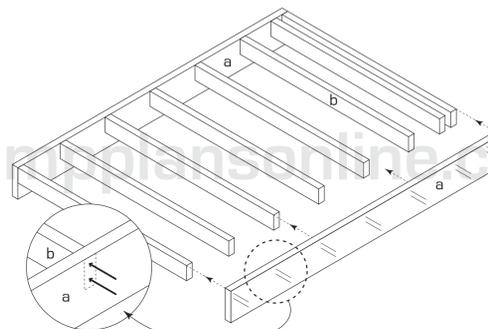
Using a circular saw, take the 4'x8'x3/4" plywood and make the cuts as shown in the diagram above. The 6'x4' piece "c" is for the riding surface. The remaining piece needs to be cut in half into two 1'x4' pieces "d" for the launch box configuration to work. If you are not making the launch box, you just need the large 6'x4' piece, and you can move ahead to step 4!



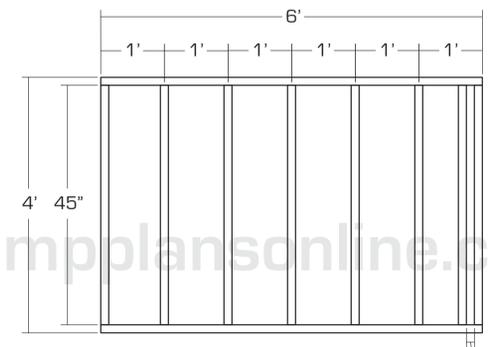
Now take one small 1'x4' pieces "d" and make the marks as shown. The notches measure 1-3/4" by 7". Just make the marks, don't cut yet!

Step 3

scale: 3/4" = 1'



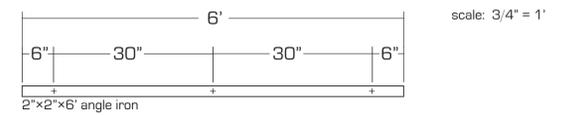
Using a butt joint, connect the 2'x8'x6' side pieces "a" with the 2'x4'x45" cross pieces "b" as shown. Insert two 3" wood screws per stud, per side. The enlarged drawing shows the even spacing you aiming for with each screw. Reference the framing plans below for correct spacing of the 2'x4'x45" studs. If you plan to use the launch box configuration, carefully space the last studs as shown. Make sure the gap is no less than 1-1/2" wide!



If you plan to use the launch box configuration, carefully space the last studs as shown. Make sure the gap is no less than 1-1/2" wide!

Step 5

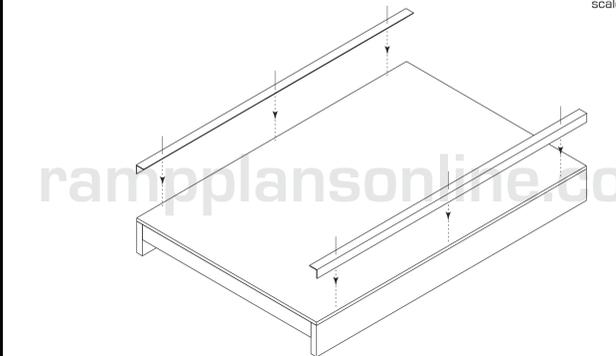
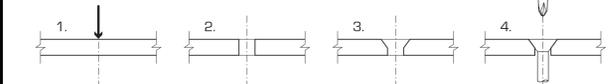
scale: VARIES



Take each piece of the 2'x2'x6" steel angle iron and pre-drill three holes as shown. Horizontally, the two holes on either end should be 6" from the edge, while the third hole is in the middle. Vertically, the holes should be centered.

Follow these steps to Pre-Drill the holes in the Angle Iron:

1. Use a drill tap to make a small indentation where the hole will be drilled.
2. Use a 7/64" drill bit to drill all the way through the steel.
3. Use a #10 (or similar) countersink bit to bore out space for the screw head.
4. The screw head should fit flush (or slightly below) the surface of the angle iron.



Attach both pieces of pre-drilled angle iron with three 3" wood screws each. The screws should bite into the 2'x8's, not the 2'x4's! Once this step is complete, the box is ready to ride in the flat configuration. Go ahead to the last step for assembling the launch box configuration! If you choose to add another riding surface, measure and cut the piece to fit after you've attached both pieces of angle iron. Any 1/8" thick surface will fit flush with the angle iron edge!

Materials & Tools

scale: n/a

Materials:	Quantity:
2" x 4" x 8' Wood Studs ¹	4
2" x 8" x 12' Wood Stud ¹	1
8' x 4' x 3/4" Plywood ²	1
2" x 2" x 6' Steel Angle Iron ³	2
3" Wood Screws ⁴	22 (or as needed)
1-5/8" Wood Screws ⁴	32 (or as needed)
1-1/4" Wood Screws ⁴	17 (or as needed)
8' x 4' x 1/8" Hard Board ⁵	1 (optional)

Material Notes:

1. Wood studs can be bought in many varieties. Douglas Fir is very common and affordable, but it is not weatherproof. The 2" x 8" stud can be substituted with two 2" x 8" x 96" studs cut down to length. Please refer to the Ramp Plans Online official website for further information about wood types and ways you can protect your ramp from the environment. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.
2. Plywood can be bought in many varieties. Douglas Fir is very common and affordable, but it is not weatherproof. Along with the species of wood, plywood also comes in a variety of different sanded finishes. Since this sheet of 3/4" plywood will be used for the riding surface you may want to consider an upgraded finish. Please refer to the Ramp Plans Online official website for further information about plywood types and finishes. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.
3. Perfect 6' sections are available at Lowes or Home Depot. Only one piece is necessary for a grinding edge, but two is recommended for frontside and backside tricks when the box is in the launch configuration.
4. DO NOT USE DRYWALL SCREWS! Use wood screws only, they should be made of a corrosion resistant silicon bronze or similar type. Please refer to the Ramp Plans Online official website for further information about fastener types. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.
5. Optional finishing surface. Hard Board, or Masonite, is NOT waterproof! But it's inexpensive. Please refer to the Ramp Plans Online official website for further information about riding surfaces. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.

Tools:

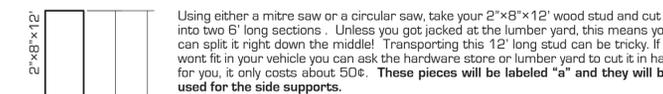
Circular Saw	#10 Countersink Bit ²
Power Drill	Safety Glasses
Pencil	Work Gloves
Screw Bits ¹	Hammer
Tape Measure	Wood Clamp
7/64" Drill Bit	Mitre Saw ³

Tool Notes:

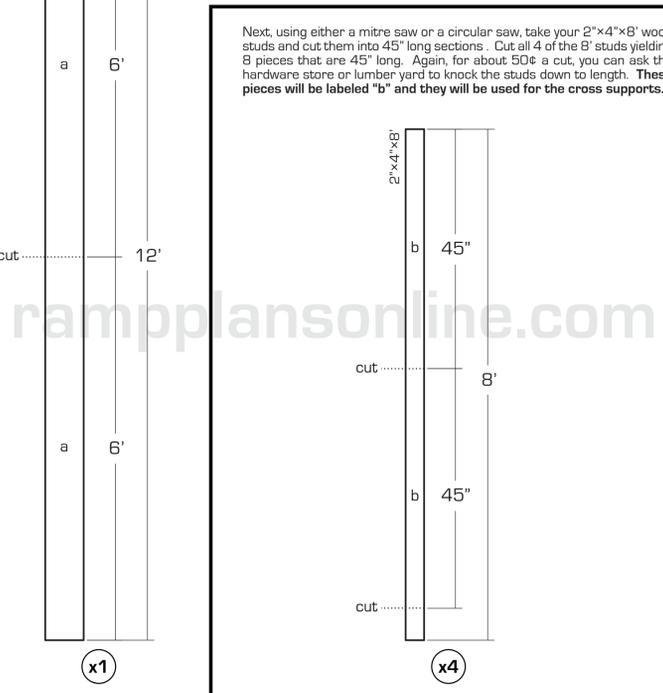
1. Bits need to match the type of screw head you have chosen. Please refer to the Ramp Plans Online official website for further information about this list of tools. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.
2. Countersink Bits taper as they drill. It is absolutely necessary to countersink the holes for the screws in the angle iron! Please refer to the Ramp Plans Online official website for further information about countersink bits. Log on to: <http://www.rampplansonline.com> and click on the **Construction & Materials** section.
3. Mitre Saw is optional. A Mitre Saw speeds the process of cutting 2"x sections. The circular saw can be substituted.

Step 2

scale: 3/4" = 1'



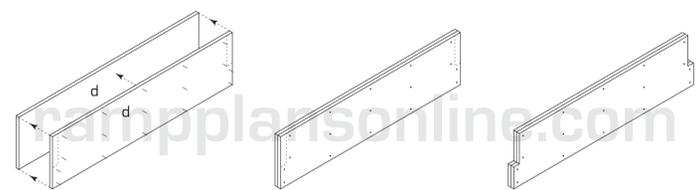
Using either a mitre saw or a circular saw, take your 2'x8'x12" wood stud and cut it into two 6' long sections. Unless you got jacked at the lumber yard, this means you can split it right down the middle! Transporting this 12" long stud can be tricky. If it won't fit in your vehicle you can ask the hardware store or lumber yard to cut it in half for you, it only costs about 50¢. These pieces will be labeled "a" and they will be used for the side supports.



Next, using either a mitre saw or a circular saw, take your 2'x4'x8" wood studs and cut them into 45" long sections. Cut all 4 of the 8' studs yielding 8 pieces that are 45" long. Again, for about 50¢ a cut, you can ask the hardware store or lumber yard to knock the studs down to length. These pieces will be labeled "b" and they will be used for the cross supports.

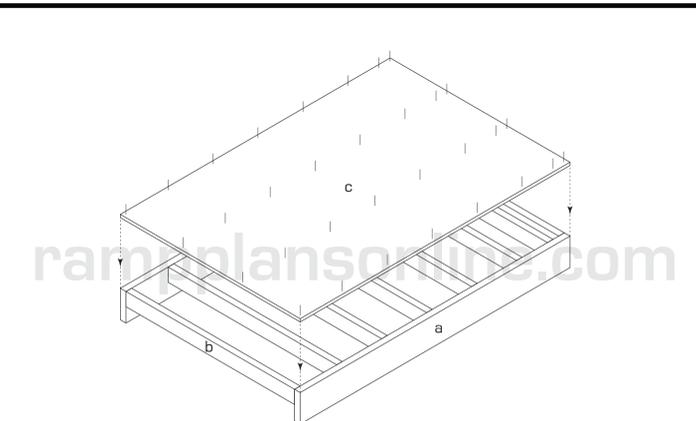
Step 4

scale: 3/4" = 1'



Sandwich together the two riser pieces "d" that you cut in Step 3. Use 1-3/8" wood screws to connect the two pieces as shown. Pin the pieces together around the edges first, and then add a few more screws to the interior. Once connected, use a circular saw to cut away the marks you drew on the top piece. This piece is necessary for the launch box configuration!

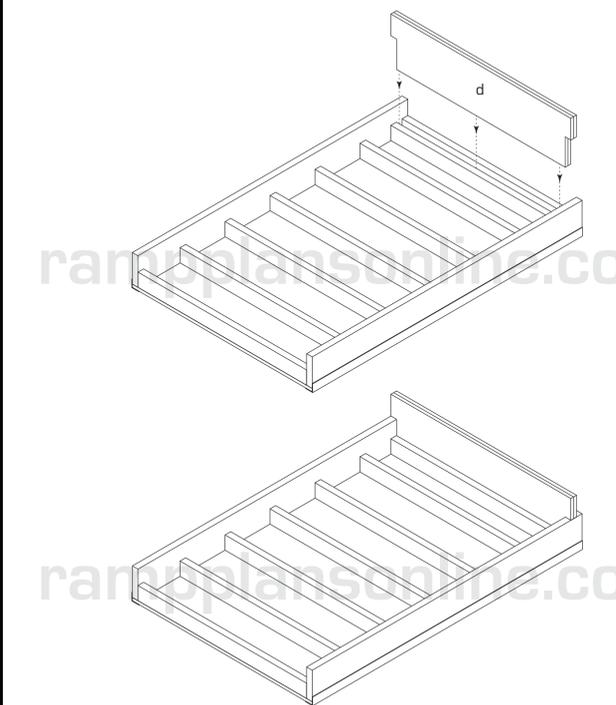
Check the fit of the riser and the width of the gap left between the two tightly spaced studs for fit. If you cannot fit the riser into the frame, you may need to adjust your frame assembly, or riser for the right fit! See Step 6 for checking the fit of the riser into the frame.



Attach the 4'x6'x3/4" plywood piece "c" to the frame as shown. Use four 1-3/4" wood screws per stud. The screws along the long edge - where the angle iron sits - should be attached to the 2'x6's "a", while the remaining two screws will attach to the 2'x4's "b".

Step 6

scale: 1/2" = 1'



Take the riser you built in Step 3 and slot it into place as shown above. The load of the box should be carried directly to the 2'x6's, while the pair of 2'x4's hold the riser in place horizontally. No hardware or fasteners are necessary to hold the riser into place! The images are shown for diagrammatic purposes only. To add the riser, it is recommended that someone lifts up the front end of the box while someone else slots the riser into place from underneath. Flipping the box over just to add the riser is not necessary! NOW GET TO RIDING!