



Let-R-Edge Channel Letter Basics I

Step by Step Guide to Channelume System™ Channel Letter Fabrication

Notes:

Letter faces may be CAD/CAM cut or manually cut with bandsaw. For bandsaw, cut faces and backs simultaneously. For CAD/CAM, cut backs with straight bit (Kerf) 1/16 inch diameter larger than bit used to cut faces.

(Step 2) Layout Tape. A clear butyrate strip .040" thick is recommended for layout pattern. Since .040" is the thickness of the Let-R-Edge® at the fit-up point, no adjustment in length is needed for a radius.

Automated letter edge patterns can be produced with a *Logixx Pattern Printer*. (Location of tabs must be in-put for each letter). [www.http://logixx.com/prod03.htm](http://logixx.com/prod03.htm)

(Step 3) Before working with the aluminum coil, use a Let-R-Edge *Coil Lev-L-R™* to remove coil set and flatten the metal. Improves fabrication speed and finished letter quality.

Use of a clamp to hold the layout tape is recommended for inexperienced letter makers.

(Step 6) Specialty E-Z® Bender is open at top allowing multiple up and down bends. A bar folder or *Roper Whitney Letter Brake* may also be used but lack the capacity for unlimited bends.

CHANNELUME/LET-R-EDGE
UNION GAP, WA USA 98903
TELE 509-452-9648
FAX 509-575-1478
www.letredge.com



Step 3.

Place Let-R-Edge® face down on a work table with the front edge closest to the letter builder. Transfer layout marks and labels from the layout tape to the metal. Work from left to right.



Step 1.

Layout. With letter, face up determine location of lap tab. (Tab is most always at left top corner). Working counter clockwise, identify and label corners and radius on letter face. ("1", "2", "3", etc. "Up", "Down", "Start Radius", "End Radius", etc). (Each letter maker develops and uses his own familiar call outs).

Step 2.

With the letter face up on the work table, carefully transfer the marks and labels applied to the letter face in Step 1 to a layout tape. Allow approximately 1 inch at the start, (top left corner) for the tab. (IMPORTANT: At each outside "UP" bend, mark layout tape .040 longer than actual stroke length. At each inside "DOWN" bend mark layout tape .040 shorter than actual stroke length).

Step 4.

Scribe a square line on inside of Let-R-Edge at each layout mark. Trim tab.



Step 5.

Using a 10" square bastard file, tipped on edge, "V" notch the factory roll-formed face retainer at each "Up" (inside) bend only.



Step 6.

Starting with the Tab, bend all Up and Down bends. For best results, use a Channelume Pneumatic E-Z® Bender.

(For radius use Channelume's special vertical roller assembly).



Notes:

(Step 7) Two matching sheets of ¼" commercial pegboard™ are separated by ¾" spacer.

A metal assembly table top may be used with magnets, (Let-R-Mags®)

(Step 9) For polycarbonate faces, IPS Weldon® No. 55 is recommended. (Joint must cure 12 hours for complete strength).

(Step 10) The over-size pilot hole in the Let-R-Edge® for No. 6 - No. 8 retainer screws may be punched with a Roper Whitney No. 5 Jr. Hand Punch.

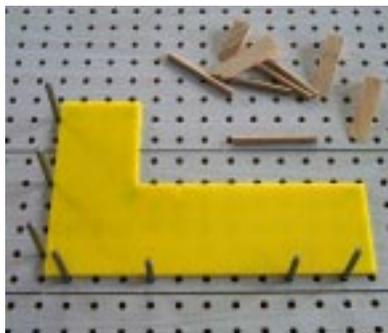
(Step 11) Use any UL Recognized Component letter back system. Reference UL's *Sign Accessories Manual (SAM)*

Demo Letter L. The average time to fabricate this letter, (not including cutting the face and back) by an experienced Channelume/Let-R-Edge letter builder would be 10 minutes or less.



Reference UL *Sign Accessories Manual (SAM)* Page 3 for *Conditions of Use* for Channelume® and Let-R-Edge®.

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Step 7.

Remove masking paper or layout marks and labels applied directly to letter face in Step 1.

Place letter face down on peg-board™ assembly table. Insert several pegs adjacent to the letter face on at least two sides to hold it in position.

Step 8.

Insert the letter face, face down into the pre-shaped metal. Place on the assembly table, resting against the pegs placed in Step 7. Insert additional pegs completely around the letter periphery. To snug fit the metal letter edge to the letter face, place wood wedges and shims between the pegs and the metal. Tighten as needed for a good fit-up.



(To make sure face rests firmly against the inside edge of the factory roll-formed Let-R-Edge® face retainer, gently tap the edges of the face down around the periphery).



Step 9.

Glue face to factory applied glue strip with Weldon No. 4 plastic cement. Use a hypodermic needle, (No.25) being careful not to "over flood" the joint. After a few minutes, (usually 5) make a second pass over the joint with Weldon No.16 glue.



Step 10.

After the glue has set for approximately 45 minutes, drill and pop rivet the lap. Locate and drill (or punch) holes in the back edge of the metal at the top and bottom for insertion of the retainer screws which must be accessible for installation and service.

(For wet location installations, drill one ¼" drain hole at each low point in the letter).



Step 11.

Bevel inside edge of letter back with a 25° Chamfer Router Bit.

Insert the letter back in the Let-R-Edge® channel. Adjust the metal for snug fit. Insert sheet metal "L" clips at the location of each retainer screw and pop rivet to Alumacor®, (or other *Recognized Component*) letter back. Drill pilot hole for No. 6 - No. 8 retainer screw, insert screw and tighten.

Touch up front edge and screw heads with matching paint from *Touch-up Kit* supplied with Let-R-Edge® coil.



Let-R-Edge® Channel Letter

Complete letter ready for installation of illumination system and labeling by North American Nationally Recognized Testing Laboratory (NRTL).