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## **Background information:**

Completed channel letters are fabricated using routered acrylic faces, routered aluminum backs, and aluminum letter returns that are bent on a channel letter bending machine (Accu-Bend). The outlines for the faces, backs, and returns are created in design software like EnRoute and saved as files to be used on the routers (Accu-Cut) and bending machines (Accu-Bend).

Industry standards are to outline the return 0.020 to 0.040 larger than the back outlines. Face outlines are outlined 0.125 greater than the back outlines so they fit nicely over the aluminum letter returns.

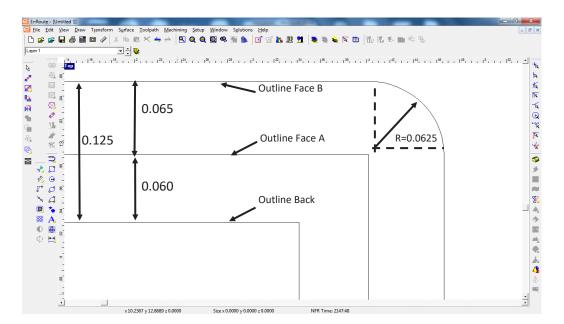
## TIP #1: How to get aluminum backs to fit better into your returns AND trim cap faces to fit better over your returns.

- 1. On your back outline, use the fillet tool with 0.0625 radius to round the sharp corners.
- 2. Using the contour for the aluminum back, create an outline for the channel letter return by outlining the back file 0.020 larger. Do **not** use the EnRoute feature to round the corners on the return outline.
- 3. Using the contour for the aluminum back, create the outline for the acrylic face 0.125 larger than the back outline. When creating this face outline, use the fillet tool with 0.0625 radius to round the sharp corner of your face outline. Rounding the corners of the face file helps trim cap from tearing in the corners.

In the face and back files, the goal is to have a .0625 radius arc to replace the sharp corners.

If you do not have a fillet tool to round corners in the **face** file, you will need to:

- 1. Create a new outline for the acrylic face, using the contour for the aluminum back. This new outline is offset by 0.06 using sharp corners, no rounded corners. This new outline is shown as "Outline Face A" below.
- 2. Create another outline from Outline Face A with an offset of .065 using rounded corners. This new outline is shown as "Outline Face B" below.
- 3. Delete the "Outline Face A".
- 4. Use the "Outline Face B" to create your face.



## **NOTE:**

If you create the face outline from the back outline with 0.125 offset and rounded corners (and do not follow the steps above to create an 0.060 and then 0.065 offset), the radius of the corners will be too large.