

# Weld-Free Cabinet Construction

ABC's "Easy Sheet" series on building extruded aluminum sign frames - 1/01

# 10

**Welding aluminum extrusions is the fastest, most economical method of assembling sign cabinets. But some sign shops are not presently set up to weld, so ABC has designed the Large and Small A Flexframes for bolt together assembly.**

Bolt-together corner kits may be purchased when ordering pre-cut frame kits. Welded assembly is recommended for any sign over 100 square feet.

Bolt-together corners require four corner brackets cut from 2" x 2" x 3/16" architectural aluminum angle. Each bracket is drilled for four 3/8" x 1" bolts. The corner brackets for the Large A/Flexframe are to be cut 8" long, and for the single face Small A/Flexframe should be 5-1/2" long.

In addition, each corner requires two 14 gauge steel, cadmium plated FLAT

CORNER PLATES, 4" x 4" x 5/8" wide with four, 1/4" x 1/2" bolts and nuts. These corner plates are standard, off-the-shelf hardware items. A total of eight are required for a four-sided sign frame.

After miter-cutting the frame, remove the C-Covers and Retainers and punch the lamp socket and hand holes in the frame. Then, place a corner angle in each end of the longest frame members, (fig. 1). See also Easy Sheet #17.

Using the angles as drill jigs, drill the holes for the 3/8" bolts, and bolt the angles in place, using lock washers and nuts, (fig. 2).

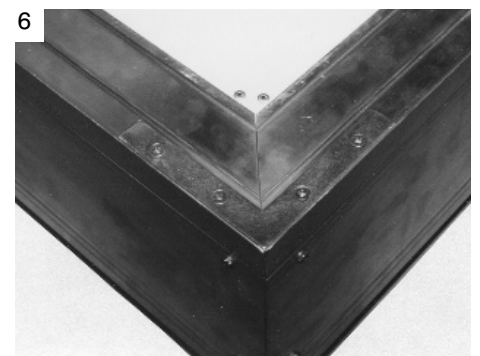
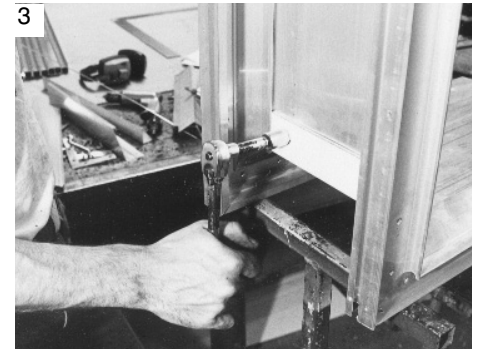
Slide the other two frame members over the corner angles and tap into place until the miter fits properly. Clamp into place, and drill the remaining bolt holes as before. Tighten bolts completely, (fig. 3).

A pair of the Flat Corner Plates should then be placed in the slots at each inside corner of the frame, (fig. 4) drilled and bolted with the 1/4" bolts, washers and nuts. The Large A/Flexframe slots are on the inside wall of the frame, just behind the Saddle for the Tensioner hardware, (fig. 5).

The Small A/Flexframe has one slot on the inside wall of the frame as for the Large Frame, and one on the back outside wall of the frame, (fig. 6).

The water drainage channels should be sealed on the underside of each top corner to prevent water from entering the wireway, (Easy Sheet #17).

The bolt-together hardware is entirely concealed in the finished sign frame, and results in a very strong, true mitered corner at a minimal cost.



**For ABC's conventional frames, fastener heads are exposed on cabinet exterior. To minimize visual impact, use these frames only for bolt-together applications of small sized signs.**

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The parts described on this page are covered by one or more of the following patents:  
U.S. 4,007,552 4,265,039  
CANADIAN 1,021,565 1,149,159 1,170,048 1,170,049 1,170,050

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