

## Plaster Installation Instruction

These instructions were derived from years of research and development and are how J.P. Weaver Co. installs their plaster molding.

### Cornice

Cornice moldings are the most difficult to install but can be trouble free if you follow the layout instructions thoroughly.

### Layout

#### Locate/Joist and Studs

##### 1. Determine projection and drop:

Although crowns are cast with a specific project and drop (height), it might be necessary to roll cornice forward or back slightly to accommodate vents, doors, etc... (moldings with corbels should not be rolled).

##### 2. Locate the lowest point in the room:

With a builders level shoot the ceiling at approximately where the molding will make contact. Map it out on a drawing. (Even if you're sure the ceiling is flat as a billiard table). Once you have located the low point, determine the remedy i.e. bad joist remove dry wall or carve plaster to accommodate the wall.

##### 3. Chalk Lines on the Wall:

After locating the lowest point of the ceiling, subtract drop and with your builders' level, shoot the walls. This line represents the bottom of the molding. Use the claw hammer to put divots in the walls to increase bonding of plaster cornice to wall.

**Shims:** Shims are almost always necessary. Set with tape or brads so they can be removed easily. Keep thick end away from corners.

##### 4. Dry Line Walls:

With a nylon line, check how straight your wall is at the bottom of the crown. In the event of a negative, shim to the line. In the event of positive obstacles, bring the line forward at both ends to accommodate and shim to the line. Leave line on walls.

### 5. Chalk Line on Ceiling:

Mark a framing square with a piece of tape at the point where the drop and projection of the molding would occur. Hold a level vertically against the framing square being sure to keep it plumb. Place framing square into the corner so that the taped mark on square lines up with the dry line. Now, mark the ceiling at the projection. Establish the distance between the ceiling and the framing square at the projection mark. Make note of this measurement on the ceiling for future reference. Follow this procedure for all walls at all corners, (in a square room, there would be eight reference points). Connect reference points on the ceiling using a chalk line.

### 6. Dry Line Ceiling:

Drive a nail at the intersection of the chalk line at all corners of the room. Run nylon line taut around the perimeter of the room. Adjust the dry line to match reference measurements on the ceiling. (Measurement taken between ceiling and top of square). (See #5) If done correctly, line should be level with the lowest point of the ceiling. Shim ceiling to line approximately 24 inches on center. Set shims with masking tape so they can be removed after cornice is affixed in place. Remove all nylon lines.

### 7. Ledger:

At wall place 8-penny nails 24" on center to support plaster molding as in dry fit stage. Place backing where necessary.

### Miter Box

We recommend using a handsaw. We personally use a 36" tree saw. Fine tooth saws do not clear well and kerf is too tight.

Build box to 8'-0" length, width to equal projection of crown, and height to equal drop of crown +3". Cut 45 degree slot on side fences to accommodate handsaw.

### Dry Set Pieces

#### 1. Locate Design Repeat:

What is the focal point in the room? Fireplace, Window, Wall Panel, Pilaster, etc....

What is the most desire element on the cornice? Basket, Shell, Leaf, etc....

How do you want them to relate to each other?

Once you have determined the focal point, here are some rules:

- I. Ornament on opposite walls should line up with each other.
- II. Ornament on outside miters take precedence over insider miters.
- III. When you have no focal point; center the desired design element on the wall.
- IV. Modillion Moldings work from corners to center.

2. Starting with most predominate wall, precut moldings and set up on temporary ledger. Focal point of cornice should center on wall or other design element such as a fireplace. Temporarily secure molding to top of ceiling. Do not leave overnight in this condition.

3. On perpendicular wall you might consider alternating the design element to accommodate the corner layout.

4. Match the ornament on outside corners.

5. **Corners:** Sometimes corner joints need to be fine-tuned. While supporting the molding, use dry wall saw and pass the blade through the joint from removing material as necessary to obtain a close fit. Once all molding in the room are dry fit, mark all joints at wall and ceiling for future reference.

## Installation

### Materials:

- I. Screws: galvanized Deck screws (min. 1" penetration into wood structure).
- II. Adhesive: USG Soft Sand 90 min. or equal (avoid tape setting compound that could cure harder than the plaster cornice molding).
- III. Burlap, nylon mesh or hemp for reinforcing joinery.

1. Remove 3 dry fit pieces. Start with focal point piece. Set face down on padded sawhorse or miter box.

Thoroughly dampen all edges and ends with large sponge. This step enhances bond of adhesive. Lay bed of USG soft sand at top and bottom enough, minimum of 2" bed. Pay attention to shims, which may require more mud. Place piece of temporary ledger, counter sink and secure with galvanized deck screws. For large cornices such as Large French and Fret, screw at approximately 24" intervals. Remove excess mud with taping knife. Fill voids as necessary.

2. Second piece same as first. In addition, place mud on adjoining ends of both pieces. Before placing piece, back first piece with burlap soaked with mud cantilevering so that it will join the two pieces together. This is messy but will greatly reduce joints from separating in the future. Have someone follow to detail joints, top and bottom as the moldings are secure in place. Do not point screws yet due to shrinkage of adhesive during curing.

3. Continue setting pieces same as 2<sup>nd</sup> piece paying attention to your reference marks (see dry set# 5), some extra shimming maybe necessary. Do not torque screws, just set them.

4. Detailing tools: ¾ artist brush (flat brush with square edge), sponge, Kemper clay scraper, pointing tool (available from J.P. Weaver), and sanding sponge. After adhesive has cured, remove shims and set screws. Detail joints and screw hold with USG soft sand. Slightly over build mud allowing for shrinking then scrape after curing but before adhesive dries completely. (If adhesive is fully dry, dampen with water to facilitate carving).

## Finishing

We use white pigmented shellac, which can be tinted to most desired color. Manufacturer is Zinsser. Product is Bin, red label, or equal.

The white shellac is a sealer and finish coat all in one. Spray on 2-3 light coats. This product imitates the look of historic plaster work in Europe. It gives the plaster a beautiful soft luster that is an ideal surface for possible future glazing or faux finishes. Do not use semi-gloss or high gloss paint, it will look like plastic and it will accentuate irregularities of joinery.

Glaze: An oil glaze over pigmented shellac makes the high relief of the ornament come alive. Benjamin Moore and Pratt and Lambert make an excellent glaze product.

## Estimating

### Footage:

1. Pieces that have a repeat less than 12" can be figured at linear feet + drop out (the length that projects beyond outside corners) + 10% waste.
2. Pieces that have a repeat greater than 12", we recommend laying out the room with molding design in mind to accurately determining piece count.

## Labor

Our small cornice will average about 30 to 40 min. labor per running foot and per miter. Large cornices will average about 1 hour labor per running foot and 1 hour per miter.

**USE THESE NUMBERS AS A PLATFORM TO START YOUR ESTIMATE.  
THEY DON'T INCLUDE HEIGHT OF CEILING, SCAFFOLDING YOUR  
LEVEL OF EXPERIENCE OR MOTIVATION.**