STEP #1: Set pitches for bowler’s thumb hole on the drill press. Line up the thumb hole using the Ultimate 1-1/2” bit (figure 1). Remove the 1-1/2” bit and drill a 1-3/32” pilot hole. Using the 1-1/2” drill bit, drill the outer sleeve hole to the preset collar depth (figure 2). Run a bevel sander through the hole to remove any sharp edges, then vacuum the hole, cleaning it of all debris.

STEP #2: Rough up the outer sleeve to strengthen adhesion to the ball (figure 3).

STEP #3: Next, apply a thin line of Ultimate 5-minute epoxy to the inside hole of the ball about 1/2” to 1” down and all around the circumference of the hole (figures 4 and 5).

STEP #4: Insert the Ultimate Installation Tool into the outer sleeve, locking into place. The scribe line marker on the top of the outer should be at six o’clock. Use the installation tool to guide the outer into the hole, using a twisting motion to evenly disperse epoxy. When in the final position, the scribe line should line up with the bowler’s center line at six o’clock (figure 6). Leave the Ultimate Installation tool inserted for five minutes to ensure the epoxy has fully cured (figure 7).

(Continued on other side)
**STEP #5:** Remove the Ultimate Installation tool. Set the drill press to zero (figure 8). Using a plug cutter, cut the top of the outer sleeve so it is flush with the surface of the ball (figures 9 and 10). The outer should be cut down and all debris should be removed from the hole prior to inserting, locking and drilling an inner sleeve.

**STEP #6:** Place a small amount of lubricant (Vaseline® or ChapStick®) on the bottom two tabs of the inner sleeve. Insert the inner sleeve into the outer sleeve. The inside sleeve has two large tabs on one side and two small tabs on the opposite side. The inner sleeve will only fit into the outer sleeve one way. Do not force the inner sleeve into the outer sleeve. Once the sleeve is inserted, turn inner sleeve 90 degrees clockwise until locking sound is heard and felt. Once the inner sleeve is locked into place, you can start drilling the thumb hole (figure 11). Set the drill press back to the pitches used to drill the outer sleeve. We recommend drilling completely through the slug, approximately 2-1/2”.

**STEP #7:** After the hole is drilled to the preferred size, set pitches on drill press back to zero and line plug cutter or router up with the top of the inner sleeve. Using the plug cutter, cut excess material off until flush with the ball. Bevel the hole and remove any excess debris (figure 12).

**STEP #8:** It’s not uncommon for a bowling ball’s core to swell after a ball has been drilled, the Ultimate Interchangeable outer now has convenient Adjustment Bands that allow for modification to alleviate a tight-fitting inner. With a bevel knife, slowly remove material from the adjustment band until you have achieved the level of tightness you desire (figure 13).