

COBRA Baseball Throwing TD

THROW AGAIN!

INTRODUCTION The COBRA is the very first ever baseball throwing TD that has been verified to be capable of creating baseball speeds in excess of 50 mph and accurate throws to over 35 meters. The COBRA is very adjustable and requires tuning to provide the user with OPTIMUM performance and natural, instinctive throwing capability. The COBRA comes with the Flex Arm angle set at approximately 45 degrees and neutral Ball Cup position. The Flex Arm and Ball Cup are easily adjustable and will REQUIRE TUNING.

ALWAYS STORE A BASEBALL IN THE COBRA WHILE NOT IN USE!

The COBRA consists of three primary parts: Wrist Adapter, Flex Arm and Ball Cup. (See Photo **A**)

The Wrist Adapter is equipped with a USA Standard ($\frac{1}{2}$ " -20), threaded, mounting stud. It can screw into a friction style prosthetic wrist or accepts a variety of quick-disconnect adapters. A tensioning machine bolt ($\frac{1}{4}$ " - 20) connects and locks the Wrist Adapter to the Flex Arm. A second machine screw (#10-32) connects and locks the Ball Cup to the Flex Arm. Tighten securely with a good Allen (Hex) wrench but be careful not to over tighten and strip the socket head.

Practice... Practice! We suggest practicing by throwing a baseball with the COBRA against a concrete or similar durable wall. Cover the wall with a sheet of plywood or foam to protect the wall. Paint a two foot diameter circle TARGET on that plywood or foam surface. (See Photo **B**) Stand back about 15-20 feet from the target and practice throwing. Adjust the COBRA and your throwing technique until you are throwing naturally and hitting the target. Step back five feet and continue to practice... continue increasing the distance as your accuracy improves. The Flex Arm captures your arm's and torso's energy during the throw using the mass and momentum of the ball, then the Ball Cup controls the final trajectory.

Tuning/Adjustment FLEX ARM The Flex Arm should be positioned and LOCKED from 40 degrees to 60 degrees from the centerline of the prosthesis for optimal performance. (See photo **C & D**). Experimentation with this angle is critical and an important part of the ball throwing-tuning process. The Flex Arm positioned at a lower angle less than 45 degrees will cause the ball to DIVE, lowering its trajectory. Increasing the angle to greater than 45 degrees will cause the ball to RISE raising its trajectory.

The baseball is held in the Ball Cup by the elastic tension of the cup material and by 4 small ramped bumps that capture the baseball at the Cup's extended "finger" edges. The Ball Cup has TWO adjustment ranges controlled by a locking screw and slot, in the center of the Ball Cup pocket. The Ball Cup can be rotated to control "Windage" of the trajectory. By rotating the cup you alter the position of the "FACE" of the cup. If the baseball's trajectory is too far to the right.. rotate the cup "FACE" **CLOCKWISE** and lock it down. If the baseball's trajectory is too far left then rotate the cup "FACE" **COUNTERCLOCKWISE** and lock it down. (See photo **E & F**)

The Ball Cup also controls the baseball's height trajectory. Rotating the cup and locking it in the Full Forward position of the slot will cause the baseball to DIVE when thrown. Rotating and locking the cup in the Full Backward position will cause the baseball to rise when thrown. Locking it in between these extremes will allow the user to tune the ball's trajectory to the user's throwing style for the best accuracy and longest, best controlled throws. (See photos **G & H**)

STITCHED SEAMS Experiment with the orientation of the baseball within the Ball Cup. The ramped bumps and flexible material release the ball due to momentum developed during the throw. If a stitched seam is captured by a bump it can cause changes in the baseball's trajectory and spin. It is possible with practice to throw a curve ball with the COBRA. A combination of ball orientation in the cup and throwing technique will influence the baseball's spin as it releases from the cup.

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For assistance and questions about the COBRA please call 800.279.1865



A. Ball Cup Flex Arm Wrist Adapter



B. Ball Throwing Target



C. Flex Arm 40 Degrees



D. Flex Arm 60 Degrees



E. Counterclockwise Rotation of Cup (Ball moves left)



F. Clockwise Rotation of Cup (Ball moves right)



G. Full Forward Cup Rotation



H. Full Backward Cup Rotation

COBRA THROWING EXAMPLES

