

PRO-ADJUSTABLE BELL MIXING KIT
#0538

Building and Installing the Bell Mixers

Parts Required:

- 2 #0093 M3x18 Special Bolt
- 4 #0107 M3x6 Steel Threaded Ball
- 2 #0562-1 M3x5 Washer
- 2 #106-01 Machined Aluminum Bell Mixer
- 4 #106-02 M3x7 Flanged Bearings

- A. Clean the entire bell mixer #106-01 in thinner to remove any oil. Clean the O.D. of the M3x7 flanged bearings #106-02. At the builders discretion use red or green Loctite to install the bearings into each mixer. **NOTE:** If more pressure is required than thumb pressure to install the bearing, find a small socket that fits the flanged portion of the bearing and gently press the bearing into place.
- B. Install two M3x6 steel threaded balls #0107 into each bell mixer with Loctite. View drawing to ensure that they go in from the correct side. Several different ratios for different styles of flying are available. The following is a description of each which will give you a idea which ratio is right for your type of flying.

NOTE: Refer to drawing for specifics on mounting position of Machined Aluminum Bell Mixer #106-01.

- 1) The 1:1.3 and 1:1.6 are the two ratios that we recommend for "hot dog" type flying. 1.3:1 will give a useable collective range of 25 degrees and 1.6:1 will give a usable collective range of 27 degrees. The 1.6:1 will have a little more collective range, more direct cyclic input to the blades and less flybar authority. Either one of these ratios combined with our Pro-II Paddles #0561-5 (at 35.0 grams or less) will give very stable fast forward flight while also giving an abundance of cyclic power for tumbles, tight loops and consecutive rolls. Either of these two ratio's will produce very fast cyclic power and should be approached cautiously.
- 2) The 1:1, 1.3:1 and the 1.6:1 will work as well for competition type flying when you need a stable hovering machine combined with smooth stable cyclic controls for doing graceful aerobatics. The 1:1 ratio will provide 22 degrees of useable collective range, 1.3:1 ratio - 20 degrees and the 1.6:1 - 17 degrees.
- C. Examine the #0317 blade mounts. Two holes are provided on each pitch arm for the installation of the bell mixers. For the purpose of this particular model, you will only be using the hole nearest the main body of the blade mount. Upon further examination, you will find a small raised area surrounding each hole. Since the outer hole is not to be used, it is advised that you remove the small raised area from that hole. A sharp knife will do this easily. This will provide suitable bearing clearance when the bell mixer is finally installed in the other hole.
- Select one M3x18 Phillips Head bolt #0093 and screw about half way through the blade mounts pitch arm and make sure that it threads in straight. Take the bolt out and push the bolt through the bell mixer. Place one M3x5 washer #0562-1 on the bolt then restart the bolt in the main blade mount and screw it all the way in until the bearings just start to drag then unscrew the bolt slightly. Once adjusted apply a liberal amount of slow Zap on the exposed threads of the bolt protruding out on the inside of the blade mounts pitch arm.

