ReadyMadeRC

Pan/Tilt Assembly Kit Instructions

Note: prior to gluing pieces, dry fit the parts to insure there are no binding joints. Lightly sand any connections that are excessively tight.

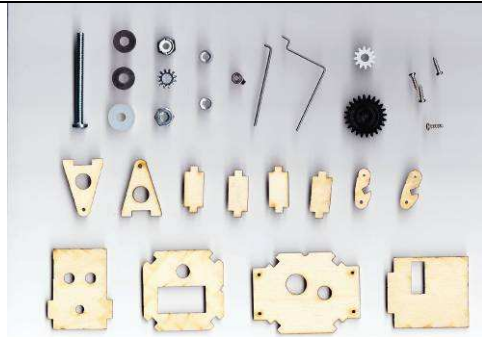Items required for completion of pan/tilt kit:
- Double sided servo tape to apply camera, and tilt servo
- Pull-ties for holding your wiring down
- Medium CA
- Your camera/video TX, and other FPV gear!

Items required for completion of pre-assembled pan/tilt assembly:
- Your camera/video TX, and other FPV gear!

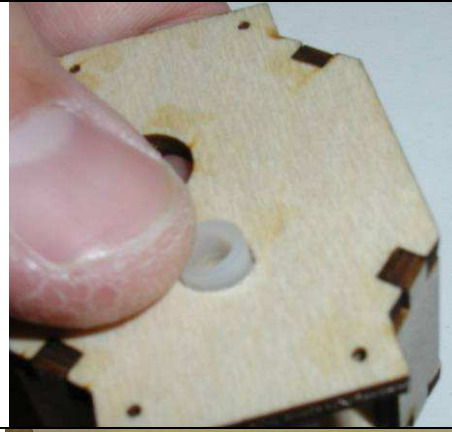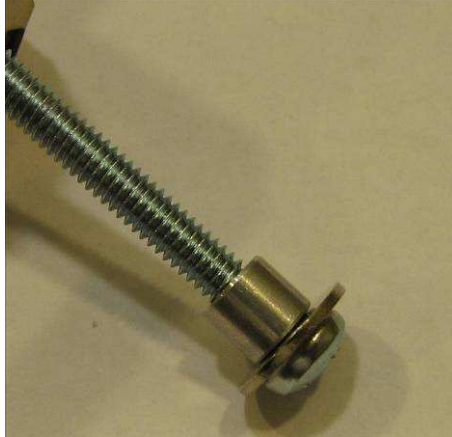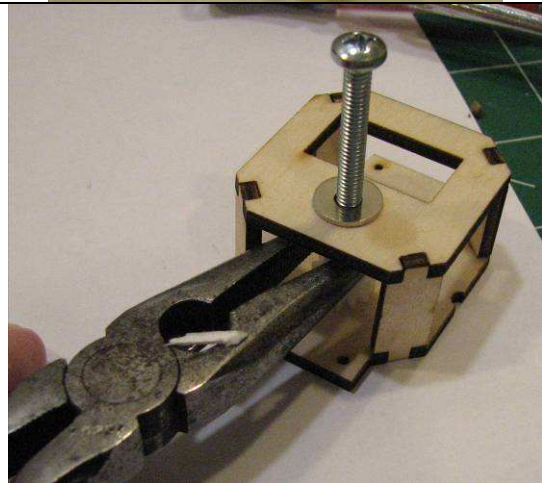|	
1. Verify all components are included. *Note: the tooth-lock washer may be a part of one of the nuts	
2. Assemble as shown and glue with CA. Make sure alignment dimples are on the same edge, and the small holes line up. Make sure all pieces are fit completely together and that the unit is not crooked.	

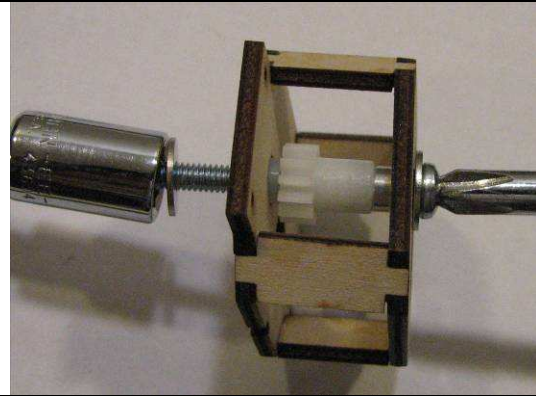|		
3. Verify aluminum spacer slides smoothly through hole on top plate. If force is required, scrape the hole with an X-Acto knife until the spacer slides through easily. (picture shows older plastic spacer)		
4. Install small washer and aluminum spacer on the bolt as shown.		
5. Holding the small spur gear snugly with needle-nosed pliers, being careful not to damage the gears, place the parts as shown and screw the bolt through the spur gear. Tighten until the spur gear is snug against the aluminum spacer.		
6. Install aluminum spacer and second small washer as shown.		

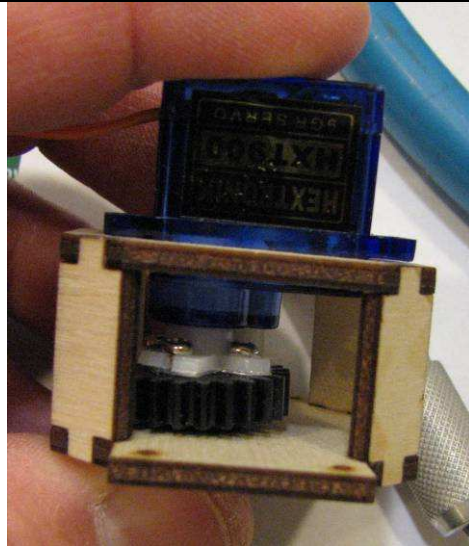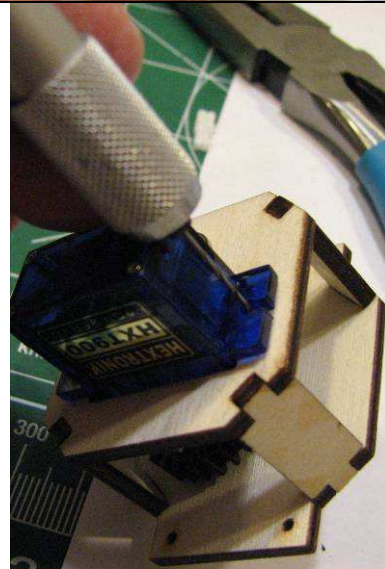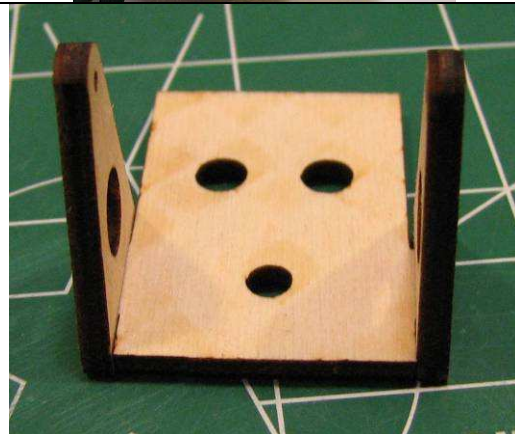|	
7. Install the lock nut until snug. Verify free movement of assembly. If gear assembly does not move freely you may back off the lock nut slightly. If it still does not move freely, disassemble the components and verify the spacers fit loosely in the holes. If needed, scrape the inside of the holes with an X-Acto knife until the spacers slide freely through the holes. If there is excess movement in the assembly, try tightening the lock nut a small amount.	
8. Cut all four arms of the large servo arm so they will not extend into the gear area of the large gear.	
9. Sand the top surface of the servo arm and the side of the large gear to roughen.	
10. Apply a thin layer of epoxy to the top of the servo arms and place it on the gear. Make sure the arm is centered in the gear (look through the opposite side to make sure the holes line up). Be careful to not get any epoxy on the gears. Quickly wipe excess epoxy away using alcohol on a rag if needed.	

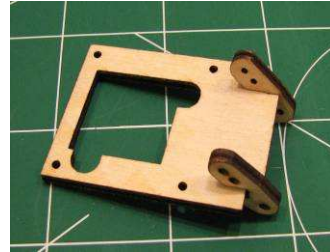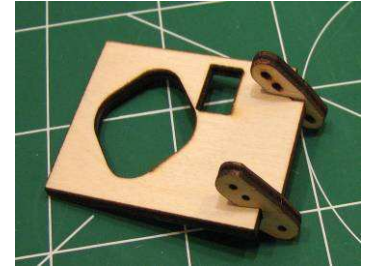|	
11. Insert the gear in the large hole and insert servo into gear. Tighten screw to retain servo horn through the hole in the gear center. (when using HS-65HB servos, a small amount of ply may need to be removed from the side of the servo opening opposite the side the gear is to be located)	
12. Verify that the gear is aligned and the servo is seated properly. Drill pilot holes for the servo screws and hold servo in place with screws.	
13. Install tilt side supports to base.	
14. Install the large nylon spacer.	

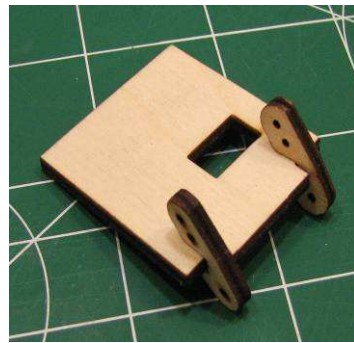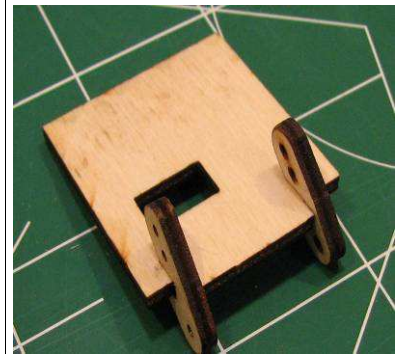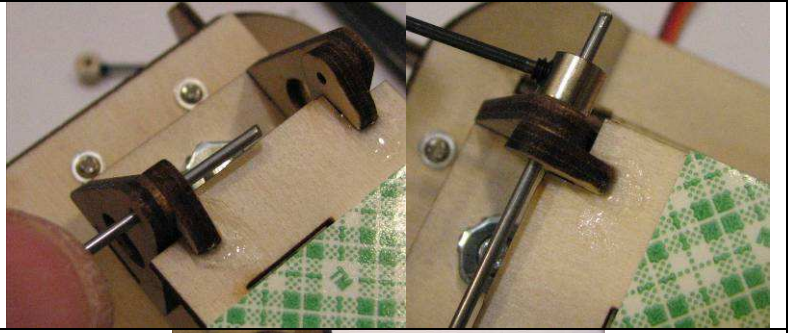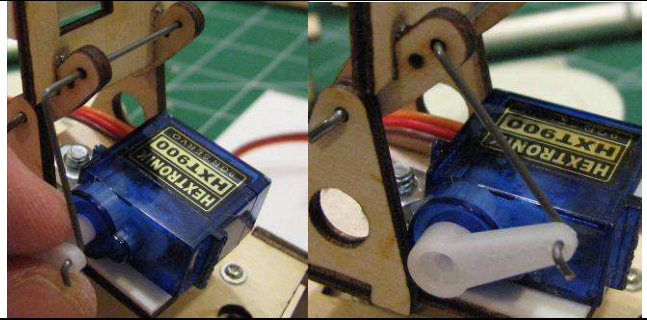|	
15. Place tilt platform on bolt. Center the servo, place tooth-lock washer and nut on and tighten down, making sure the tilt platform is facing the proper direction. Make sure that no force is being applied to the servo by holding the bolt with a screwdriver.	
16: Install hinge assembly to camera plate.	*DX201(Sold Separately)* *OSD Cam (Sold Separately)* *KX171, IF Cam, SN777, SN555* *KX131, KX191*
17. Apply double sided tape (servo tape) to the tilt platform and the camera back plate.	
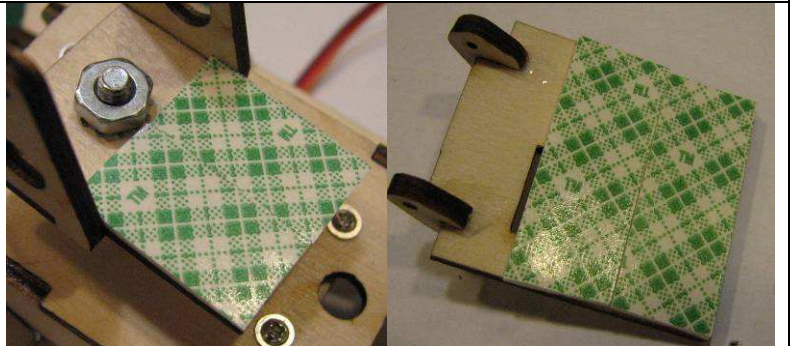
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18. Insert hinge through supports and back plate. Slip the collar over the end and tighten securely.	
19. Snip the screw plates off of one of the servos using wire cutters. Clean the servo with alcohol and a paper towel. Apply servo to tape as shown.	
20. Insert control rod into the inside of the servo arm. Slide the control rod into the holes in the back plate as shown. Make sure servo is centered, and place servo arm onto servo making sure the back plate is vertical or tipped slightly forward. Secure servo arm with screw.	
21. It's highly recommended that you add zip-ties to the tilt servo to prevent loosening between the servo and the double sided tape.	
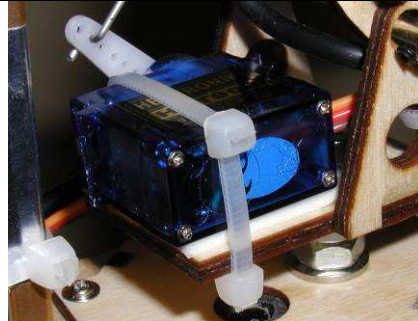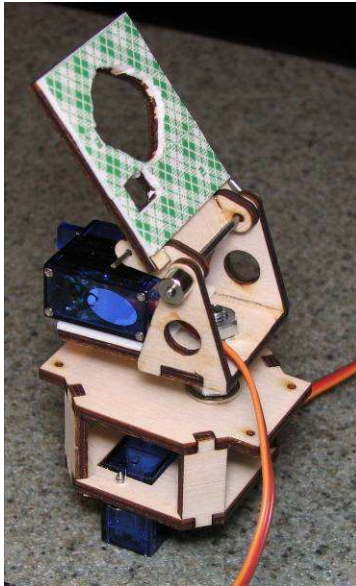
Cutout dimensions for stand-alone use:

Units in inches.

Ø3/32 x 4

0.53   Ø0.5

1.75

0.72
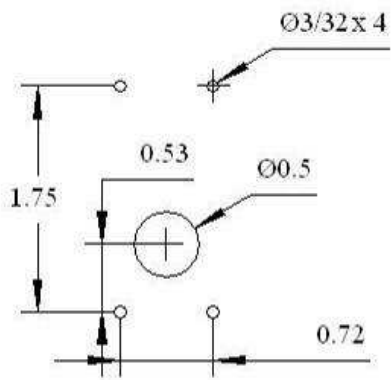
Cutout locations for through-mounting

Ø3/32 x 4

0.27

1.5

1.5   1.75

0.72
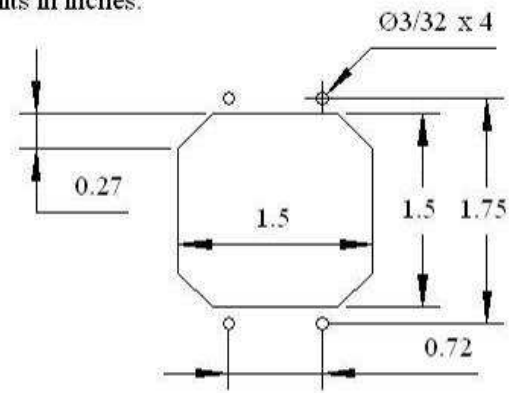
Cutout locations when inserted through mounting surface.