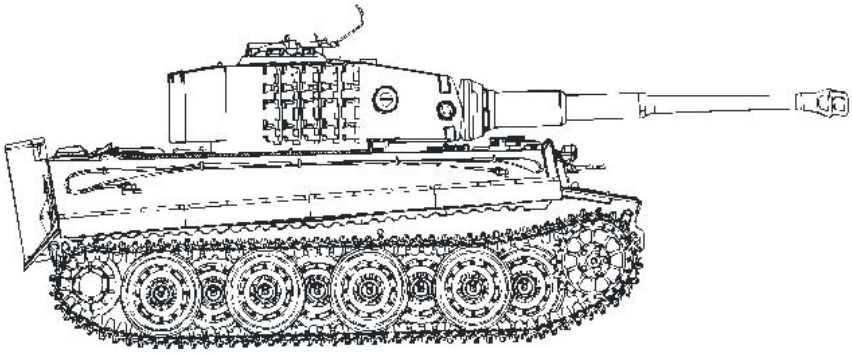
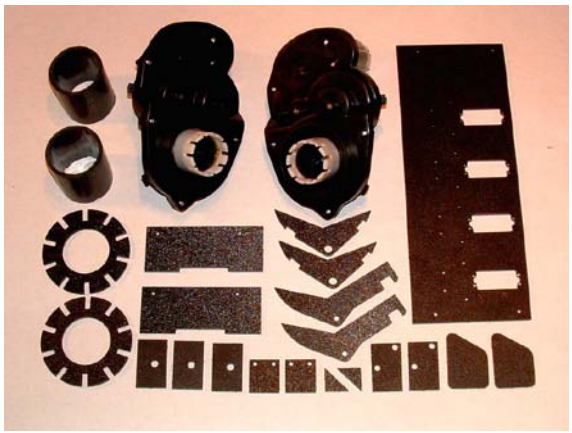
Field of Armor
RADIO CONTROL TRACK SYSTEM INSTRUCTIONS
1/6 Scale



Items needed:
- ABS Glue or Modeler Super Glue
- Trimmers (Plastic Clippers, knife)
- Power Tools (Drill and hobby tool such as a Dremel Tool)
- 1/16”, 3/32”, 1/8”, 3/16”, 3/8” Drill Bits
- Hand Tools (Pliers, Screwdrivers, Hex Head Driver, Wire Crimper, Tape Measure)
- Masking Tape
- Marker Pen or Pencil
- Liquid Correction / White-Out, other liquid correction or a small amount of paint.
- Clamps



ABS Parts	
Gear Spacer Drive Tubes	2
Gear Spacers	2
Motor Units	2
Motor Mount Supports	2
Outer Motor Mounts	2
Idler Axle Plates	2
Idler Stabilizer Plates	3
Idler Plate Gussets	2
Idler Reinforcement Plates	2

Hardware (Note, head types may vary)	
Bushings	6
Push Nuts	4
Angle Brackets	2
8 x 32 1-1/4” Bolt, Lock Washer, Nut	2
#12 x 3/4 Screws	4
4 x 40 x ½” Machine Screws	12
#4 x 3/4” Screws	8
#8 x 18 x1/2” Self-Tapping Screws	4

IMPORTANT WARNINGS:

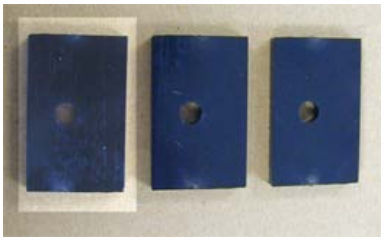
Small parts may pose chocking hazard to small children and other mammals.

CAUTION: TO AVOID CUTTING YOURSELF, TAPE THE SHARP EDGES AND CORNERS OF THE SIDE SKIRTS. RECOMMEND USING ELECTRICAL TYPE TAPE. BE VERY CAREFUL WHILE TURNING THE UPPER HULL AND TURRET OVER. KEEP SMALL CHILDREN AWAY FROM THE TANK AND WORK AREA WHILE WORKING ON THE UNDERSIDE OF THE UPPER HULL.

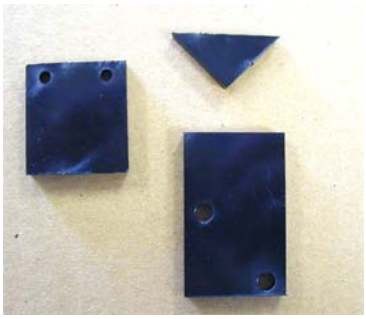
READ THE COMPLETE INSTRUCTIONS BEFORE BEGINNING WORK.

Step 1: Preliminary Work: If the basic Tiger tank has already been completed, remove the front gear wheels and the rear idler wheels from the hull. If the 18 track link set has been installed, remove the front bar assembly. Cut the bar mounts flush with the hull.

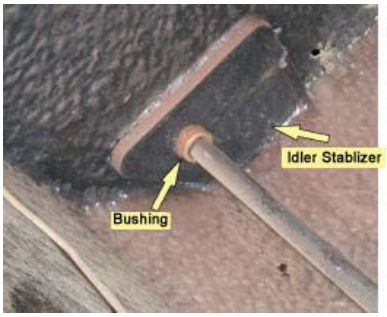
Step 2: Idler Stabilizers: Locate the three Idler Stabilizer plates. Align the holes and use ABS adhesive to glue the three plates together with a clamp. Let dry for at least 15 minutes, or until the adhesive has set.



Step 3: Motor Mounts: Locate the Motor Mount plates, consisting of the Triangle Brace, the Square plates and the Rectangle Plates. Attach the Triangle Brace, with ABS adhesive, along the side of the Rectangle Plate and the Square Plate. The Square plate will sit on top of the Rectangular Plate. Let dry for 24 hours.

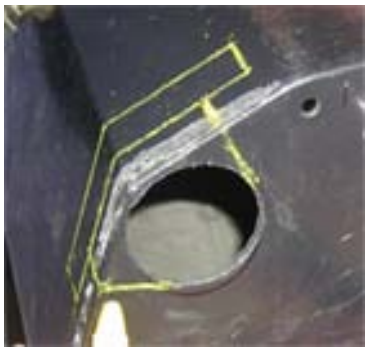


Step 4: Installing the Idler Stabilizers: Center the Idler Stabilizer inside of the back of the hull, and in line with the idler wheel axle. Attach an idler Reinforcement to each side of the hull, where the idler axle goes through the side of the hull. Secure the parts to the hull with ABS adhesive. Let dry for at least 24 hours. After the ABS adhesive has completely dried, drill a 3/8" hole through each of the Idler Reinforcements. Use the outside Idler axle hole as a drilling guide. Install the axle and the two metal bushings. Reassemble and install the idler wheels on to the axle.

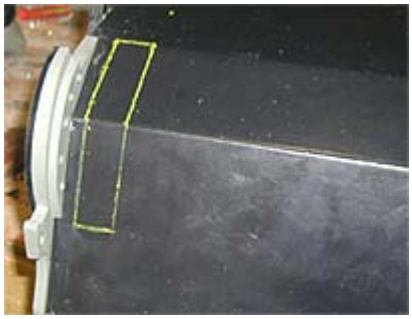


Step 5: Locating Track Motors: Use the drive gear axle hole as a center guide and drill out a 1-3/4" diameter hole with a hole saw. Repeat for the axle hole on the opposite side of the hull. On the front hull, mark as shown in the photo below. Note, the first photo indicates the completed measurements.

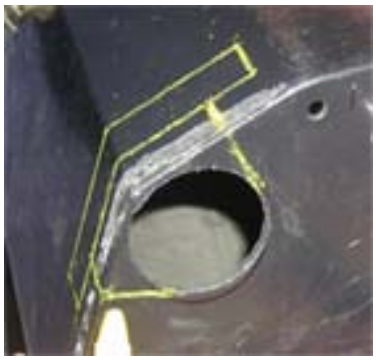
A). Measure down from the top of the hull 2-1/2".
B). Measure in from the side by 2".
C). Measure from the side by 7/8".
D). Mark flush with the bottom hull angle plate.
E). Connect the tick marks as indicated in the photo below. Repeat for the other hull side.



Step 6: Locating Track Motors, Continued: Mark 1-1/4" from the bottom hull angle plate. Draw a line from the 1-1/4" mark. Repeat for the other side.



Mark 3-5/8” from the hull lip. Draw a line to the 1-3/4” diameter hole on the side of the hull. Repeat for the other side. Carefully cut along the scribed lines.

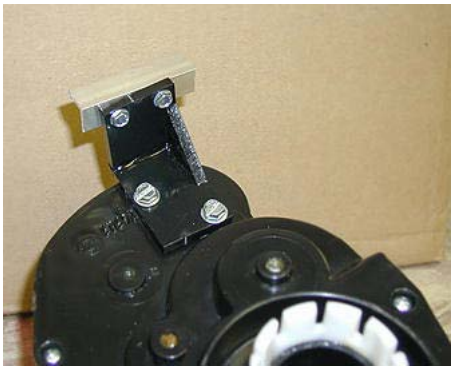




Step 7: Mount Installation: Use ABS adhesive to glue the Outside mount on top of the hull cut, flush with the edge. Glue the Support Mount against the inside of the Outside Mount. Repeat for the other side.


Step 8: Bracket Installation: Attach the “L” brackets to the back of the Square Plates on the Motor mounts, as shown below. Center the “L” bracket on the back of the Square Plate and mark the hole locations. Use a 3/32” drill bit for pilot holes. Install the “L” bracket flush with the top edge of the square plate. Secure the “L” brackets with #2 screws.


Step 9: Attach Motor Mounts to Motor Housing: Attach the Rectangle Plates to the Track Motor housings, using #11 screws. Use the existing holes in the track motor housings.

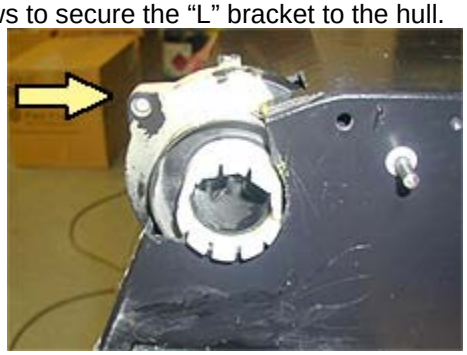




Step 10: Track Motor Installation: Push the Track Motor into the cut-out hole in the hull. The mount on the front of the Track motor will click into the Outside Mount hole, which was installed in Step 7.

Remove the screw on the outside of the Track Motor, as indicated by the arrow in the second photo. Using the 3/16" drill bit, drill out the hole and then slide the #12 screw through both the Track Motor and the Outside Mount. Tighten down with the kep-nut.

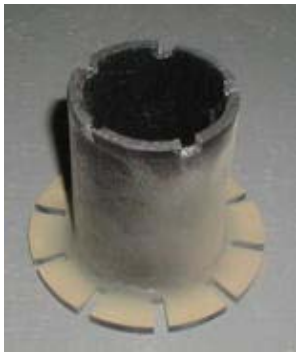
Secure the Motor Mounts to the side of the hull by drilling through the "L" brackets and hull with a 3/32" drill bit. Use #4 screws to secure the "L" bracket to the hull.


Step 11: Sprocket Bushing Installation: Press a bushing into the center axle holes of all four sprockets**.** Press the bushings into the sprockets so that the lip of the bushing is resting on the center axle hole.


Step 12: Gear Spacer Keyways: Locate the two Gear Spacer Tubes and one of the sprockets. Turn the sprocket upside down and lay on a table or other flat surface. Apply some Liquid-Paper Correction (LPC) on the outer ¼" of each of the five inner webs. In lieu of LPC, a small amount of paint may be used. Carefully place a Gear Spacer Tube over the center of the sprocket so that a small amount of LPC or paint is transferred to one edge of the Tube. Wrap a piece of masking tape around the tube, 1/8" down from the edge. Cut five keyway grooves into the Tube, each being 3/16" wide and 1/8" deep, which is to the edge of the masking tape. Repeat for second tube. Note that only one side of each Tube will have the five keyways.

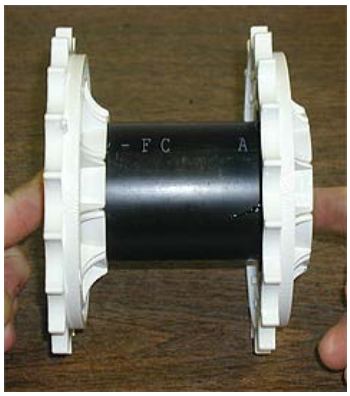
Step 13: Gear Spacer Assembly: Center the Gear Spacers onto the Spacer Tubes, opposite the cog grooves. Glue the Spacer to the Gear with ABS adhesive.



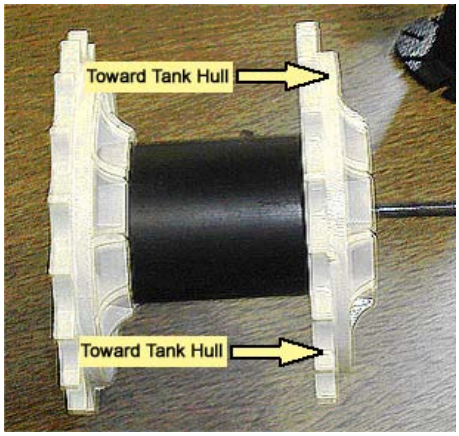
Step 14: Hull Bushing Installation: Press a bushing into the idler stabilizer plate, from the outside of the hull. The lip of the bushing should touch the outer hull plate.

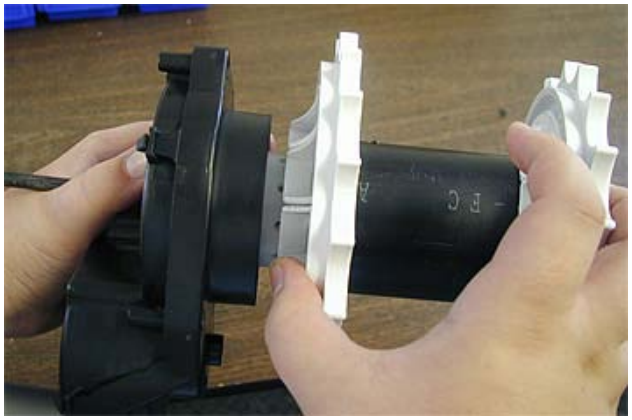
Step 15: Idler Wheel Installation: Reassemble the idler wheel onto the back of the hull. Check that the axle goes through the Idler Stabilizer and Idler reinforcements. Reinstall the axle spacers and secure each Idler wheel with a push nut.

Step 16: Drive Sprocket Assembly: Assemble the Spacer Tubes to the Outer Drive Gears by pressing the cog groves on the Spacer Tubes onto the backside of the Outer Drive Gears. Place the other drive gears over the Gear Spacers. Check the spacing of the Drive Sprockets by fitting the track around the sprocket. Apply adhesive to the assembly and allow to dry completely, with the track wrapped around the sprocket assembly.



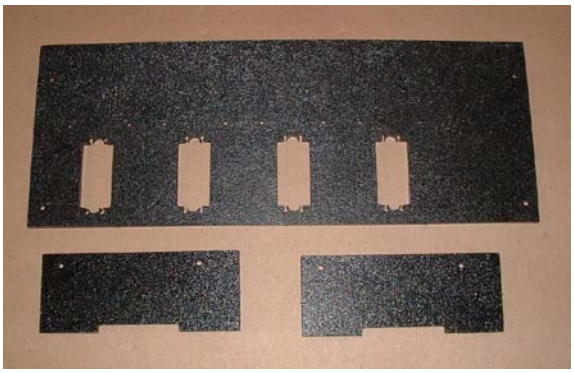
Step 17: Drive Sprocket Installation: Slide the Drive Gear Assembly onto the drive gear axle. Slide the drive gear axle through both Track Motors. Press the backside of the Drive Gear Assembly onto the Track Motor teeth. Attach a push nut to each side of the drive gears and secure the axle in place.

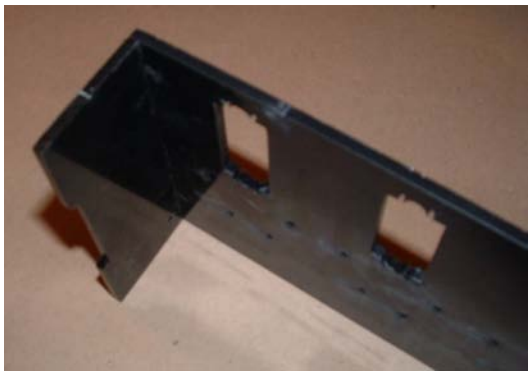




Step 18: Equipment Shelf Construction: Locate the Equipment Shelf and the two vertical support arms. The Equipment Shelf has cut outs for four servos, which were used for the previous version of the radio control systems. The Equipment Shelf retains the four servo cut outs, so that this improved version may be used in conjunction with older RC upgrade kits. If servos are to be mounted to the shelf, check that the servo will fit in the cut out, without having the bottom of the servo touching the hull floor or the axles. If necessary, use scrap plastic to raise the Equipment Shelf.

For this new version of the RC upgrade kits, the Equipment Shelf is to be used for the track speed controllers, which can be mounted to the Shelf with wire tie wraps or double sided vibration resistant tape. If tie wraps are used, install foam padding between the speed controller and the straps and shelf.
Attach a vertical support arm to each end of the Equipment Shelf, with ABS adhesive.





Dry fit the Equipment Shelf into the lower hull. Use one edge of the Equipment Shelf as a brace for the 12volt battery. When satisfied with the location, apply adhesive to mount the unit to the lower tank hull.

Typical Wiring Instructions.

Items Needed:
- Wire Cutters and Wire Crimpers
- Battery, 12volt
- Electrical Tape
- Speed Controller(s)

Vantec Dual Control unit for dual track controls, Vantec model RDFR-21/22 (www.vantec.com).
Or, two single control speed controllers, with forward and reverse, rated for 12volts, such as Novak Super Duty XR model SG-2814. (This can be purchase from Tower Hobbies, www.towerhobbies.com), or other hobby companies.

Step 1: Wiring for the Track System: The photo below indicates a wiring package for the independent track system. The wiring instructions shown here are for a typical installation with a Vantec speed controller. The final wiring may vary to do any changes made by Vantec to their speed controllers, or if other speed controllers are used. Verify that the supplied female wire connectors will attach to the speed controllers. Some brands of speed controllers will require other types of wire connectors, which are not supplied with this kit.

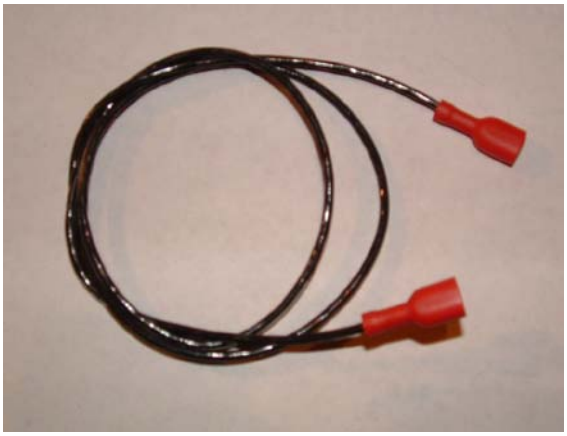
Wiring Materials
(Note parts supplied may vary in style than those shown).

18 ga Red Wire	5 feet
18 ga Black Wire	5 feet
Fuse Holder	1
Fuse	1
Toggle Switch	1
Female Connectors	14

Step 2: Wiring for Switch and Fuse Harness: Cut one piece of the red wire 12 inches long. Attach a female connector to each end. Connect one of the connectors to the toggle switch. The other end of the red wire is to connect to the positive lead of the 12volt battery. Connect a female connector to each end of the fuse holder wires. Connect one end to the toggle switch. The other end is to connect to the speed controller(s).

The toggle switch is to be mounted on the Equipment Shelf. Select a position that can be reached from the open engine grille, located on the upper hull. Drill a 3/8" hole through the Equipment Shelf and insert the toggle switch from the bottom of the shelf. Secure the toggle switch with the mounting nut.

Step 3: Wiring for Battery Negative Side: Cut one piece of the black wire 12 inches long. Attach a female connector to each end. the negative side of the battery. Connect the other end to the speed controller(s).



Step 4: Wiring for Motor Harness: Cut two pieces of the black and red wires, each 24” long. Attach a female connector to each end of the four wires. Use electrical tape to connect the wires into two pairs, each with one black and one red wire. Each pair of wires is to be connected to a motor, with the other ends connected to the speed controller(s).

Step 5: Wiring Diagram: Refer to the wiring diagram for a schematic of the independent track wiring and control system.

If you have any questions, contact us at:
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www.r-c-tanks.com