



BANDIT 3.5

Assembly Manual

No.5212

Specifications:

Length: 33 1/4" (845mm)

Beam: 11 3/8" (290mm)

Weight: 2260g* (80oz)

TT-PRO-21M-0B Recommended



Warranty

This kit is guaranteed to be free from defects in material and workmanship at the date of purchase. It does not cover any damage caused by use or modification. The warranty does not extend beyond the product itself and is limited only to the original cost of the kit. By the act of building this user-assembled kit, the user accepts all resulting liability for damage caused by the final product. If the buyer is not prepared to accept this liability, it can be returned new and unused to the place of purchase for a refund.

Notice: Adult Supervision Required

This is not a toy. Assembly and running this product requires adult supervision.

Read through this book completely and become familiar with the assembly of this boat. Inspect all parts for completeness and damage. Browse www.thundertiger.com for more information or customer service if you encounter any problems.

INTRODUCTION

Thank for purchasing Thunder Tiger Bandit 3.5 outboard tunnel hull! This performance F-1 racing boat is test approved by Hydro World Champion Jorgen Andersson that means you will experience the racing thrill very soon. No matter if you buy a Kit, Engine Combo or Ready to Run-Super Combo, read the manual thoroughly to familiar with this boat as well as some assembling tips and safe cautions is strongly recommended.

Before you begin the assembly please check entire contents of the kit against the parts drawings to be sure that no parts are missing or damaged. If you find that any parts are either missing or damaged, please contact your dealer immediately for replacement. Note: Your dealer cannot accept kits form return if construction has begun.

Please contact Thunder Tiger authorized distributor for tech support and customer service if you encounter any problem in assembly or running.

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SAFETY PRECAUTIONS

- Do not get anything close to the spinning propeller as it is dangerous and may cause serious injury.
- Never run this boat in water where there is any swimmer, animal or obstacle. It might cause property damage and serious injury if a collision occurs.
- Refer to radio manual and always do the range, frequency checking to avoid any possibility of interference. Never take the risk to run the boat without doing these checking procedures.
- Model fuel is highly flammable. Always store it in cool, away from sparks or heat source.
- Always exam the fuel lines and make sure there is no leak and fuel lines are in well condition.
- Always start your engine in an open as it exhausts deadly carbon monoxide.
- Do not touch the engine until it has cooled down. Special when pick up the boat from water.
- Wear safety glasses is strongly recommended as spinning propeller may throw loose material such as sand or gravel into your face.



Developed in Cooperation with
Hydro
World Champion
Jorgen Andersson



ITEMS REQUIRED FOR COMPLETION



No.8217

Radio - A 2ch Radio with 2 standard servos is required. Most 2ch radio is workable available in the market. However, we suggest a Pistol Type radio gear is highly recommended.

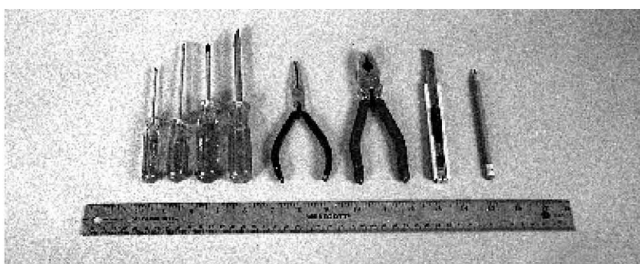


No.9567

Outboard Marine Engine-Thunder Tiger #9567 PRO-21M-OB 3.5cc Outboard Marine Engine is Strongly Recommended.



Adhesives- You will need two types of adhesives for the assembly-epoxy and instant adhesives.



Tools-Model assembly can be much easier if the proper tools are used. Therefore we have included in our checklist to above, a complete listing of all the tools we used to assemble this boat. As you will notice, many household tools can be utilized during construction.

OTHER ITEMS FOR COMPLETION



No.1263-65

Carry Master-Thunder Tiger offer a complete organizer of field equipment. All you need is included.



Individual Item

Fuel
15~30% Nitromethane Model Fuel.



No.2156~2161

Glow Starter-Thunder Tiger 2.4Ah high capacity Glow Starter provides long time power to the glow plug. Each glow starter comes with wallcharger.



No.2674

12V DC Starter- Provides high torque starting power to start your outboard engine.



No.2624

Sealed Battery- 7Ah 12V Sealed Battery.



Dry Cell- AA size 12 pcs Alkaline dry cell are required.



No.1102

4 way Wrench-Easy to unplug the glow plug.



No.1645

Pump-An efficient hand crank fuel pump.

COMPREHENSIVE ITMES NEEDED CHECK LIST

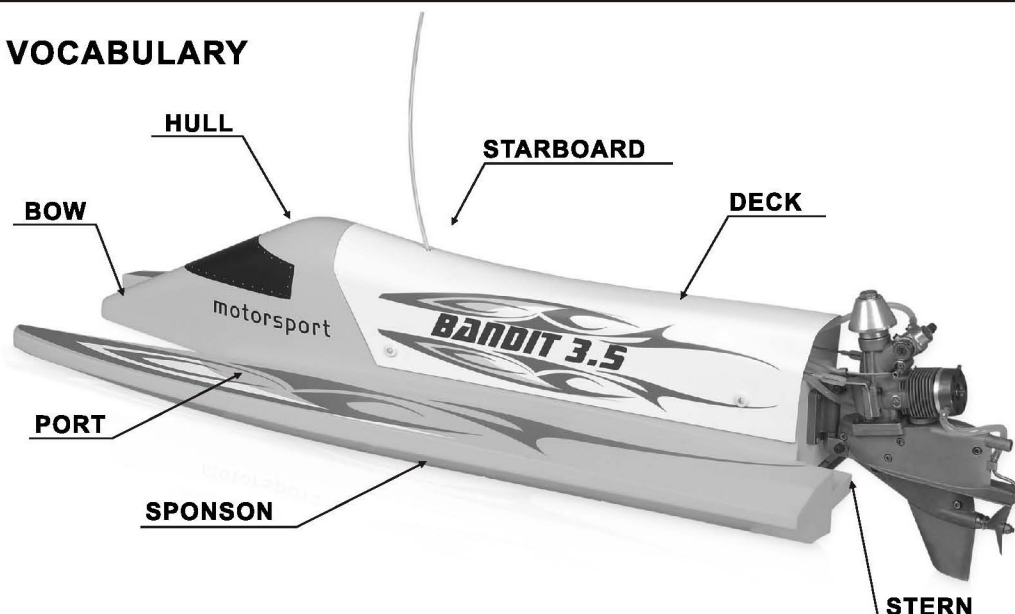
- 2ch Pistol Radio
- 5-min Epoxy
- "Thin" Instant Adhesive
- Hobby Knife and Blades
- Epoxy Mixing Sticks
- Masking Tape
- Rubbing Alcohol
- Paper Towels
- Ruler
- Misc. Household Tools
- Hook & Loop Material
- Balance Lead Weight (100~130g)
- Drill bits: 1/8"[3mm], 9/32"[7mm]



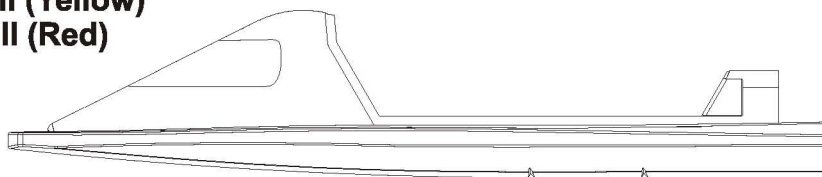
Kit Contents:

Hull (1)	M2 Washer (2)	Pad (L/R/1)
Stand (1)	Double Side Tape (2)	Double Side Tape (2)
Radio Box(1)	3x20mm Wood Screw (4)	Fuel Tube (1)
Rubber Plug (1)	Retaining Post (4)	Racing No. Decal (1)
Switch Boot(1)	Stopper (1)	Throttle Wire (1)
Waterproof Seal (2)	90-degree Nipple (1)	Guild Tube (2)
Balloon(2)	180c.c Tank (1)	Clevis (2)
EZ Connector (2)	Cap (1)	Steering Wire (2)
3x3mm Set Screw (2)	Clunk (1)	Upper Deck (1)
Hex Wrench(1)	Silicone Tube (1)	Grommet (4)
M2 Nut (2)		

BOAT VOCABULARY

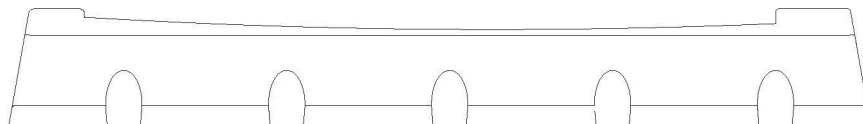


PJ6076Y Tunnel Hull (Yellow) PJ6076R Tunnel Hull (Red)



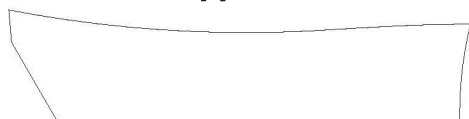
Hull (1)

PJ6077 Display Stand



Stand (1)

PJ6078 FRP Upper Deck

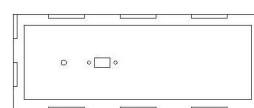


Upper Deck (1)



Grommet (4)

PJ6080 Radio Box



Radio Box(1)

PJ6079 Waterproof Set



Rubber Plug (1)



Switch Boot(1)



Waterproof Seal (2)



Balloon(2)

3169 EZ Connector



EZ Connector (2)



3x3mm Set Screw (2)



Hex Wrench(1)



M2 Nut (2)



M2 Washer (2)

PJ6081 Hardware



Double Side Tape (2)



3x20mm Wood Screw (4)



Retaining Post (4)

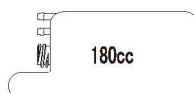
3261 Fuel Tank



Stopper (1)



90-degree Nipple (1)



180c.c Tank (1)



Cap (1)



Clunk (1)



Silicone Tube (1)

PJ6082 Recovery Pad



Pad (L/1,R/1)



Double Side Tape (2)

1177 Fuel Tube



Fuel Tube (1)

PJ6083 Racing No. Decal



Racing No. Decal (1)

PJ6084 Linkage



Throttle Wire (1)



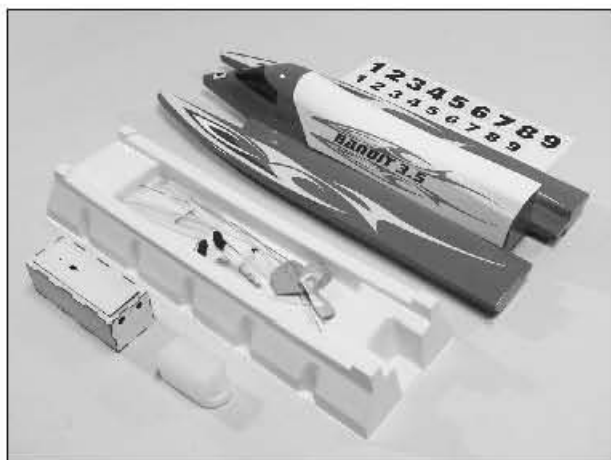
Guild Tube (2)



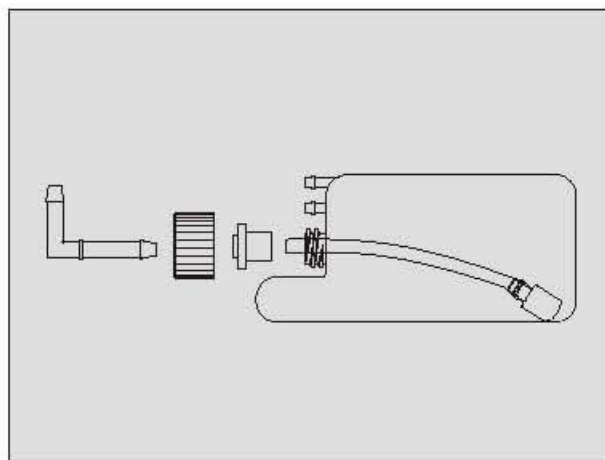
Clevis (2)



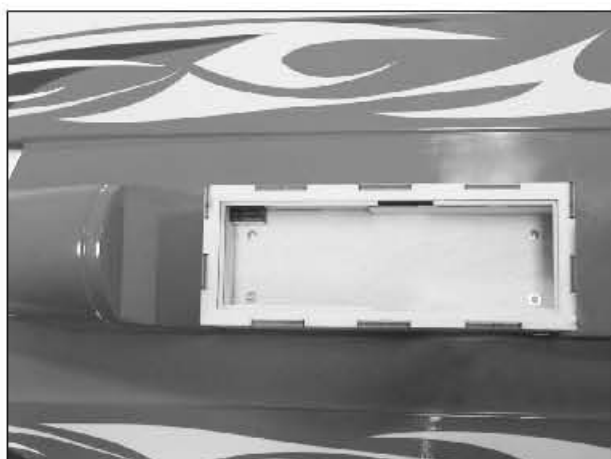
Steering Wire (2)



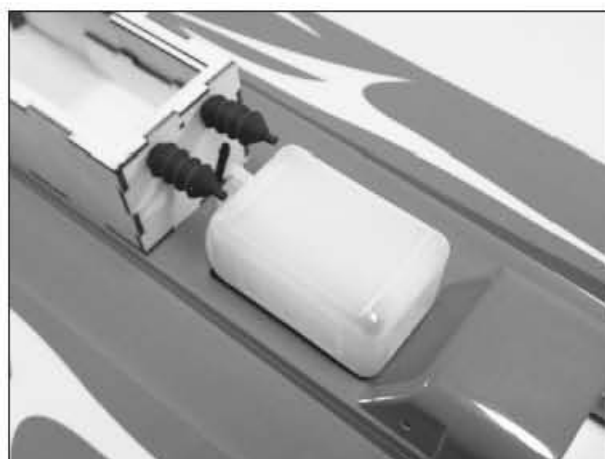
1. Carefully remove your Bandit 3.5 and stand from the box. Locate all enclosed parts from the box. You may put small parts in the display stand.



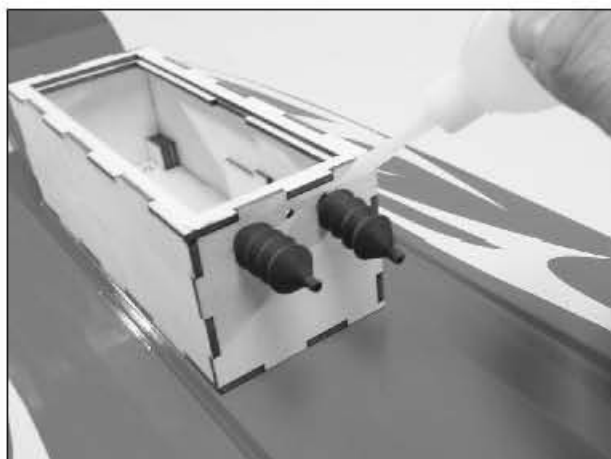
4. Get fuel tank accessories and assemble the fuel tank as shown.



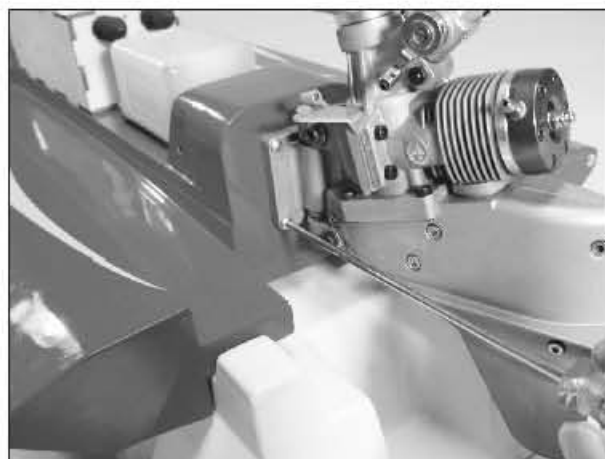
2. Secure the assembled radio box in place with CA firmly.



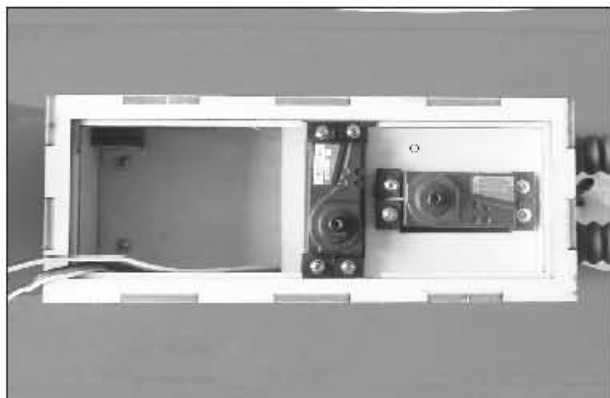
5. Use rubbing alcohol to clean the contact area of fuel tank then secure the fuel tank in place with double side tape.



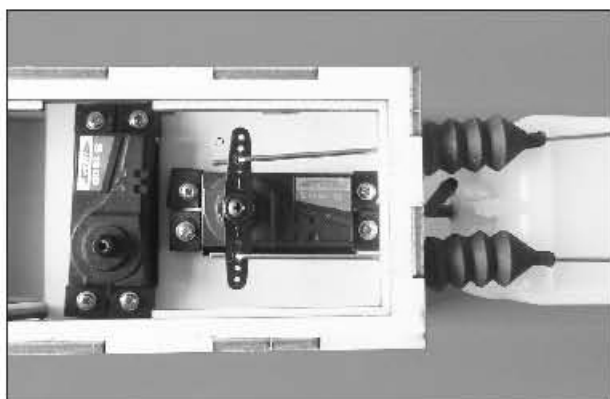
3. Insert the waterproof seal in place then carefully apply CA glue around the seal and secure it in place.



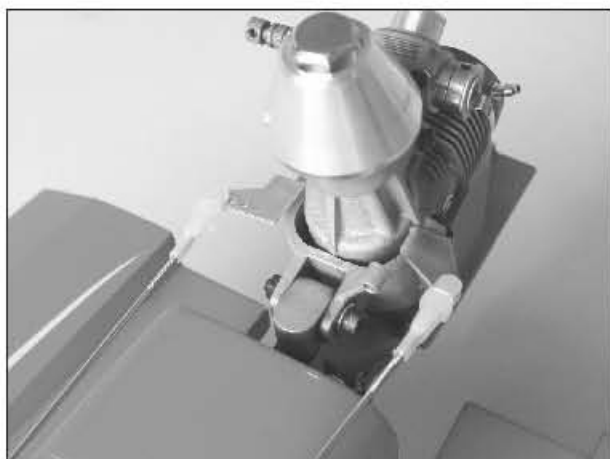
6. The engine mounting holes are pre-drill in factory to fit Thunder Tiger outboard marine engine. Apply epoxy in the hole then secure the engine with four 3x20mm Self-Tapping on the transom.



7. Install standard servos with rubber grommets and eyelets in place as shown. As radio box is small, it is suggested to secure the servo in servo tray first then glue the whole servo tray in place. Note: A mark on servo tray should face up.



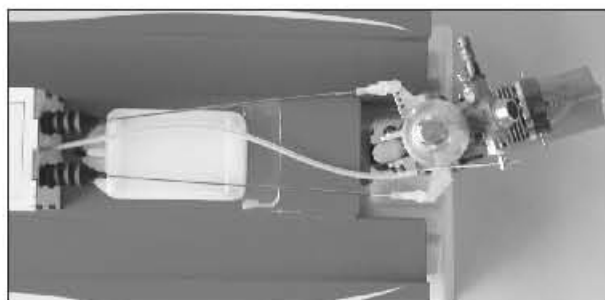
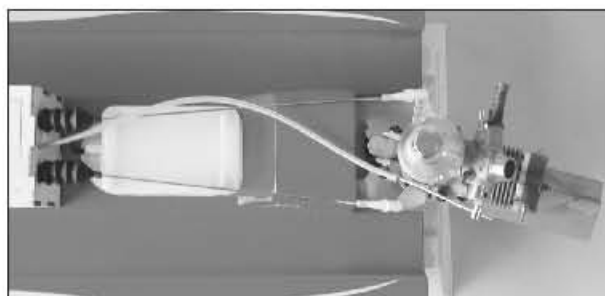
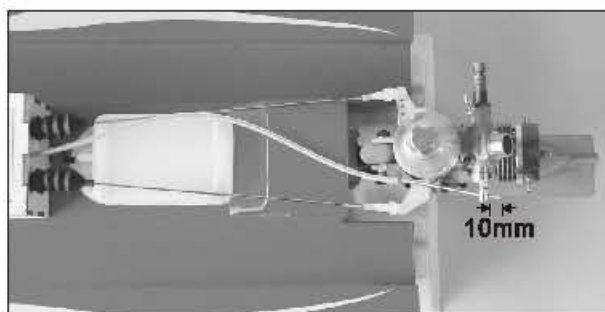
8. Thread the steering wire from inside radio box through the waterproof seal. Lube the wire and seal contact area with grease, this will smooth the control. Thread the other Z-bend end to the servo arm then secure the arm with the screw when servo is in neutral position.



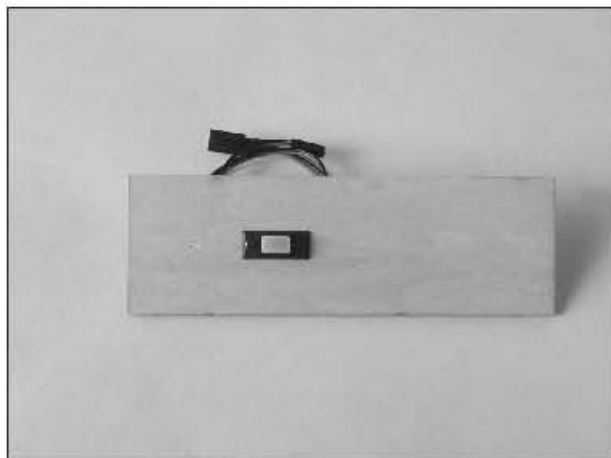
9. Thread the clevis onto the wire and snap to the outboard engine steering arm. Adjust the clevis and make sure the engine is centered. Cut a piece of fuel tube to help secure the clevis as shown.



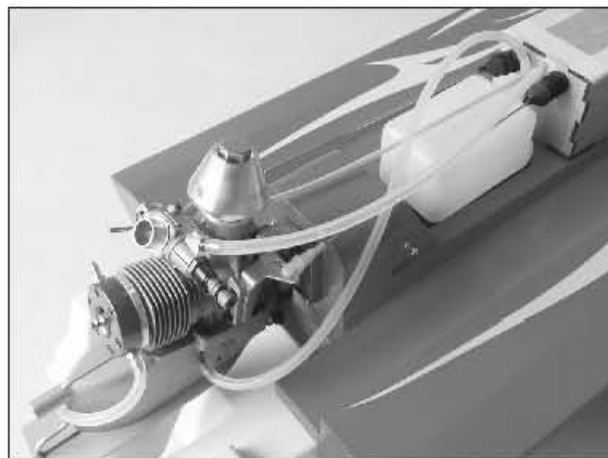
10. Locate throttle wire and guide tube, Insert the guide tube(measure it at 27 cm) into radio box case and leave about 5cm in length in the box. Thread the other end to the outboard engine cable housing. You may need to sharpen the tube and for easy access. Next install the EZ connectors both on engine throttle lever and servo horn. You may need to enlarge the throttle lever hole for EZ connector.



11. Insert the wire and secure the wire with 3x3mm set screws on EZ connector. Adjust the throttle wire and make sure the guide tube is curvy as illustration shown. Note: outboard engine steers by physically pivoting from side to side. Make sure throttle control is smooth. Cut away the excess wire.



12. Install the switch with the switch boot.



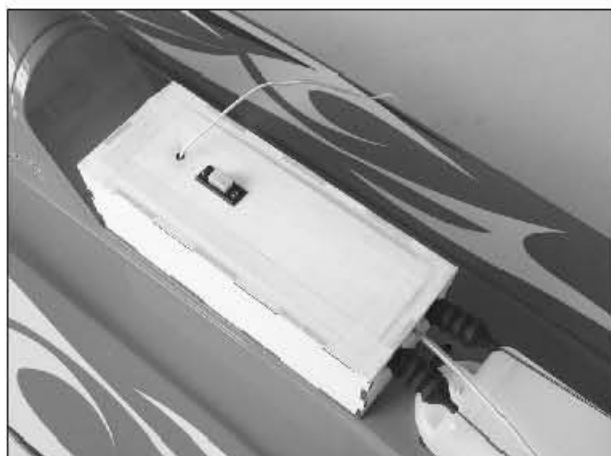
15. Refer to engine manual for fuel line connection. Connect all fuel lines properly. Make sure there is enough fuel line so engine pivot freely.



13. Connect all wires properly then install the receiver inside the balloon, use tape or small rubber band to seal the opening. This will help to protect the receiver in case of flipping. Do the same way to the battery case. Suggested to add weight about 100g-130g in radio box case, this is will help the hard turn in the water.



16. Trial fit the upper deck on the hull, use mask tape to tape it in place. Drill 3mm hole at the molded dots at both two sides and deeply into the hull.



14. Seal the radio box cover with mask tape as shown.



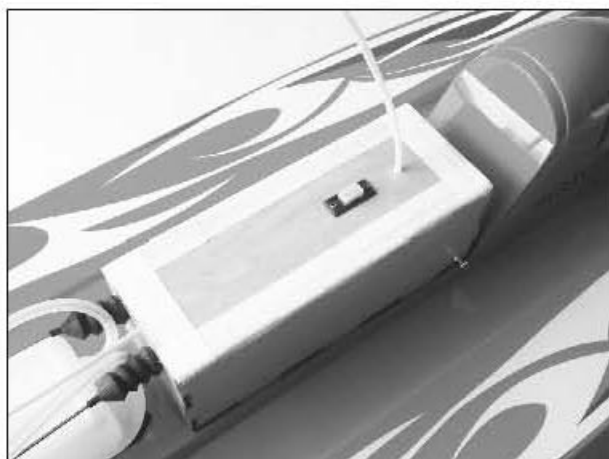
17. Remove the upper deck from the hull. Screw in the retaining posts at the holes you drilled.



18. Drill the antenna guide tube hole on the upper deck at the molded dot.



19. Use reamer to enlarge the hole up to 7mm in diameter. Install the grommet in place.



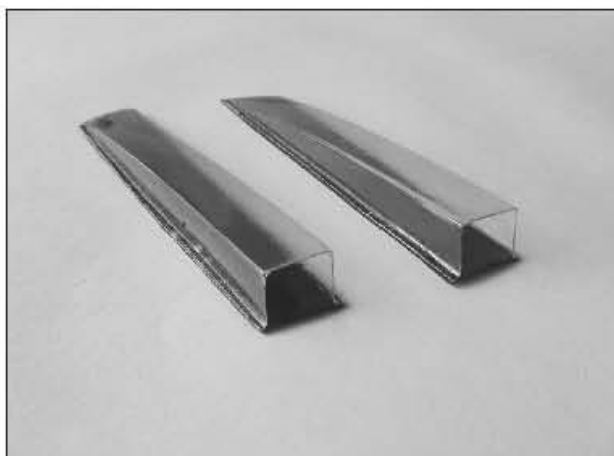
20. Thread the antenna through the guide tube then. Insert the antenna guide tube on the radio box cover, use CA to secure the guide tube in place.



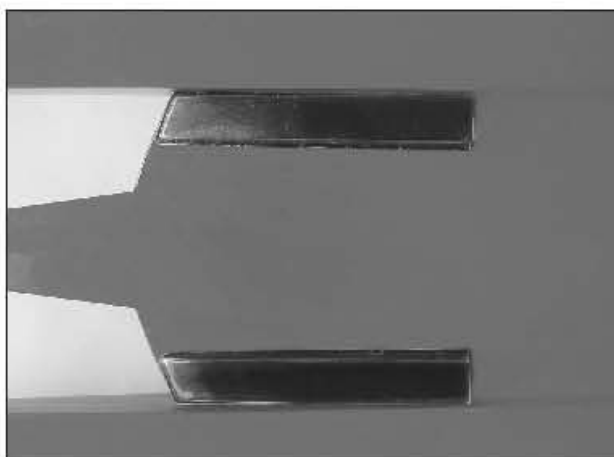
21. Trial fit the upper deck and push the grommets on the retaining posts. You may adjust the retaining post to make the rim of deck close to the hull. Remove the hull and apply CA to each post.



22. Choose and apply the desired racing no. as shown.



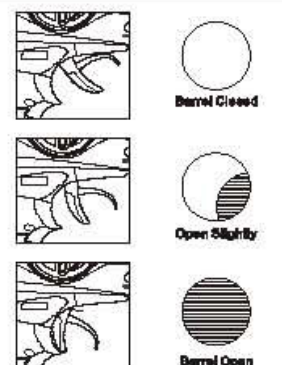
23. Trim the pads as photo shown. It has to trim away the aft portion so water will not stay in the pad. The recovery pad is not necessary unless you run into any Hooking situation. < One of the sponsons digs into the water and spins suddenly the rear of the boat around. Engine is easy killed when this occurs.>



24. Secure the recovery pads in place with double side tape.



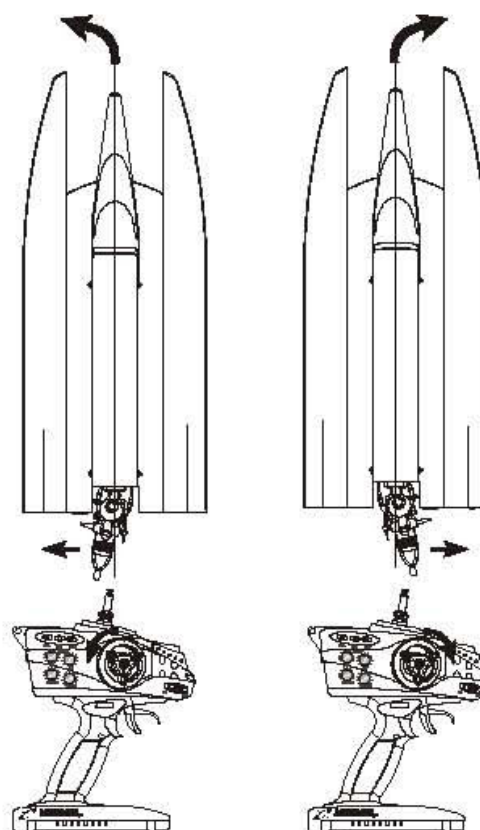
25. Attach the rubber plug at the transom. Make sure it is tight fit in the hole. If the hole is too large you can use CA glue to make it slightly smaller.



RADIO CHECK

Check the radio manual to familiar with the adjustment of the throttle activity and the steering dual rates.

In above figures, squeeze the trigger on the transmitter; throttle is opened. Conversely, moving the trigger forward, throttle is closed completely. If this is not the case, you will need to reverse the direction of the servo. Check the instruction manual that came with your radio system for the correct procedure.



Make sure the steering is correct when rotate the wheel on the transmitter. Later on when running the boat you may trim the steering by adjusting the trim knob on your transmitter until it runs straight when the steering wheel is at neutral position.



Now you may break-in your outboard marine engine. Refer to engine manual about the engine break-in procedure. 15% nitro fuel is good for boating fun. Of course the higher percentage of Nitro, the more of the power. However, high er nitro means higher price and also will decrease the life of engine.

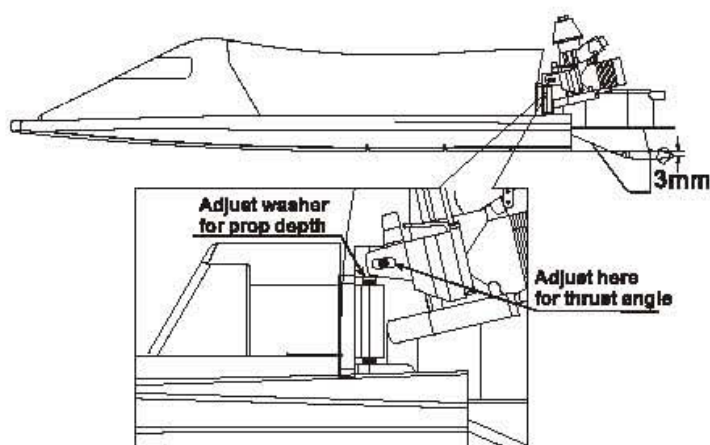
PERFORMANCE TIPS& RACING

BALANCING THE BANDIT

The Bandit has been tested with Thunder Tiger Outboard Marine Engine that it might need to add weight about 100g-130g(4-5 oz) in the radio case will help the performance in cornering and handling rough or choppy water conditions.

BALANCING THE PROPELLER

To improve performance, balancing the metal propeller is highly recommend. First remove any flashing on the propeller then use quality propeller balancer to do the balancing. It is not necessary to polish the propeller as it only improve the out-looking.



Congratulations!

Now you are ready to test your boat!

The thrust angle and prop depth are the most important two factors for cornering characteristics that you may adjust if you encounter following situation. Basically the tunnel hull is suit for running on calm water. All the adjustment must do on calm water.

THRUST ANGLE

The default setting of the thrust angle is in the neutral position. However, it might be necessary to adjust if you meet the following situation.

Bow Up-Adjust the thrust angle to negative so it will Downward the bow.

Bow Down-Adjust the thrust angle to positive so it will Upward the bow.

PROP DEPTH

The default setting is 3mm from prop shaft to the bottom line. If user use other engine then you will have to re-drill the mounting hole for correct depth. Please refer to Engine Manual to adjust the propeller depth when cornering to reach peak performance if necessary.

Submerging-Adjust the angle to positive.

Sliding-Lower the depth will help reducing

By carefully adjusting the prop depth and the thrust angle you can find more speed and increase the stability of the boat to suit your driving style. Different props also change the characteristics of the boat. Please take your time with this set-up!

RUNNING THE BANDIT

LAUNCH PROCEDURE

1. Refer to radio manual and always transmitter on first receiver last.
2. Start the engine and (Refer to Engine Manual to start the engine). always stay clear of spinning propeller.
3. Place the Bandit carefully in the water and make sure that there are no obstacles in the way like rocks and weeds.
4. When finished running, stop the engine then receiver off first transmitter off last.

MORE RUNNING TIPS!

Besides the "Safety Precautions" at the beginning of this manual we recommend you read through the following valuable tips that help you enjoy boating the Bandit successfully and safely.

- Make sure the water cooling system is working properly or it will cause engine overheated.
- Refer to engine manual to lubricate your engine periodically.
- Choose a windless day to run your Bandit as wind can cause rough water that will affect the performance.
- The running of Bandit is about 7~9 minutes (full tank of fuel). Always notice the running time and have it back to the shore before engine quits.
- Check the lake and wind direction then choose a good location for boating. The wind can carry it back to the shore if engine is quit. The following is a good way to get your boat back. Retrieve the stalled or capsized model boat with a fishing rod that equips a reel. Tie a tennis ball on at least 12 lb. string.
- Do not run your Bandit on a flowing water like creeks or rivers as well as jump into the water or swim after a stalled or capsized boat!
- Always keep running away from wildlife, do not intend to threaten with any wildlife with your Bandit. This is prohibit at any lake or pond.

Happy Boating!

MAINTENANCE

RADIO BOX

Check Radio box immediately once flipping is occurred. Always keep radio box open after running to absorb any moisture.

Always place the receiver and battery in the balloon. Always remove receiver and battery from balloon after running.

Water resistant tape is good for sealing the radio box cover to the radio box.

Use "Hair Gun" or any way to dry the radio box, connectors, switch and all the components in the box.

HULL

1. Always clean the hull after each run special at the areas where has fuel or exhaust residue.

2. Pull the rubber plug located on the transom every post-run and drain out any water that may have found inside the hull. Insert the plug before running and check its tightness.

3. Always unplug the rubber plug once you would store for a period of time, this is to keep the moisture out of the hull.

ENGINE

Pump out all fuel after running. Then remove the glow plug and drop some After-Run-Oil or spray WD-40 in the carburetor (Full Throttle) then using starter to rotate the cone and make sure the lubricating oil is in.

RACING

It is always exciting to race with other boats. Be aware of following suggestions before you go race with other boats.

1. Fine tune your engine and boat. Make sure all screws are fasten firmly.
2. Aware of the environments and racing course.
3. Aware of the rough water created by other boats.
4. Keep distance to other boats and avoid crash.

MODEL BOATING ORGANIZATIONS

Please browse the following website for more details of regional or national racing.

United States and Canada:

APBA www.Apba-rcboating.com

IMPBA www.impba.net

NAMBA www.namba.com

France

FFMN www.ffma.fr

Great Britain

MPBA www.mpba.org.uk

Sweden

SMBF www.smbf.info

Australia

AMPBA www.ampba.asn.au

Here are some suggestions for setting up a simple race course for boats:

Make 3 simple "Marker Buoys" with beach ball, string, and heavy objects for anchors, similar to the sketch below. Place the buoys as following sketch for "OVAL RACING". The length can be vary.

