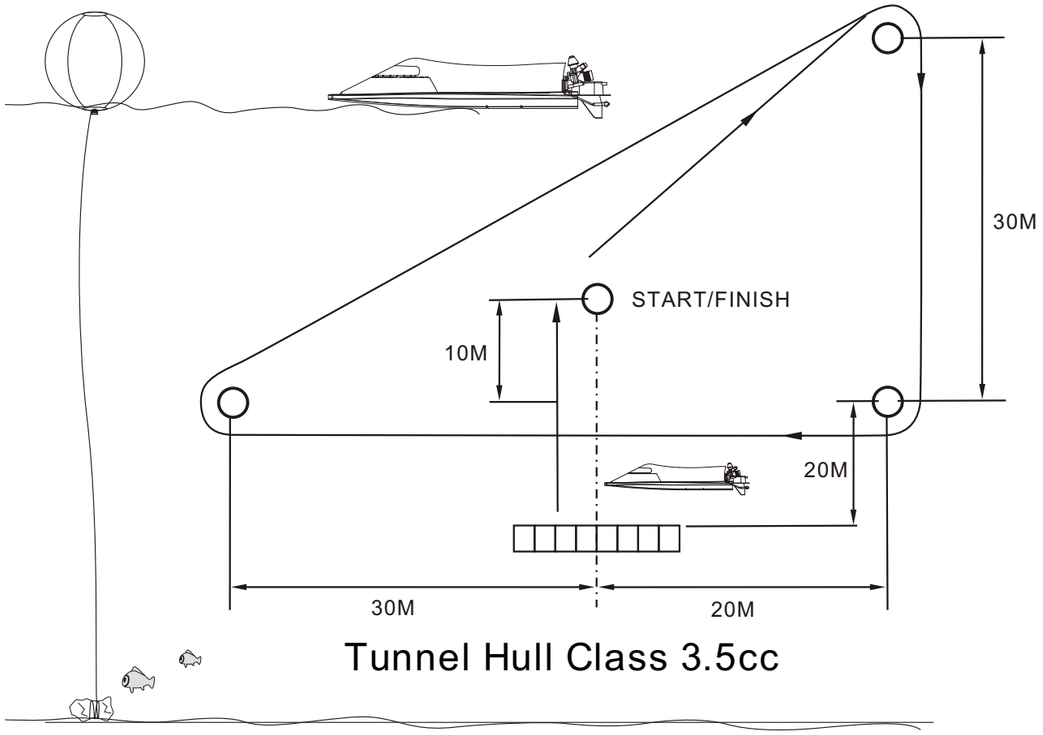


Tunnel Hull Class 3.5cc

MEMO

Thunder Tiger

Bandit 3.5 II

Assembly Manual



No.5210

Specifications:
Length: 33 3/8" (848mm)
Beam: 11 1/2" (293mm)
Weight: 68.8oz. (1950g)
TTPRO-21M-OB 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 in 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.

JJ6092

INTRODUCTION

Thank for purchasing Thunder Tiger Bandit 3.5 II 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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Other Items Required.....3
Items Need Check List.....3
Parts Listing.....4
Parts Drawings.....5
Assembly.....6-9
Radio Check.....10
Performance Tips & Racing.....11
Running Tips.....11
Maintenance.....11

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.



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.

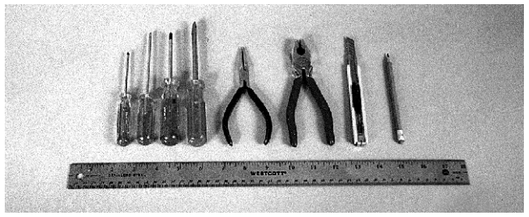


No.9567

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]

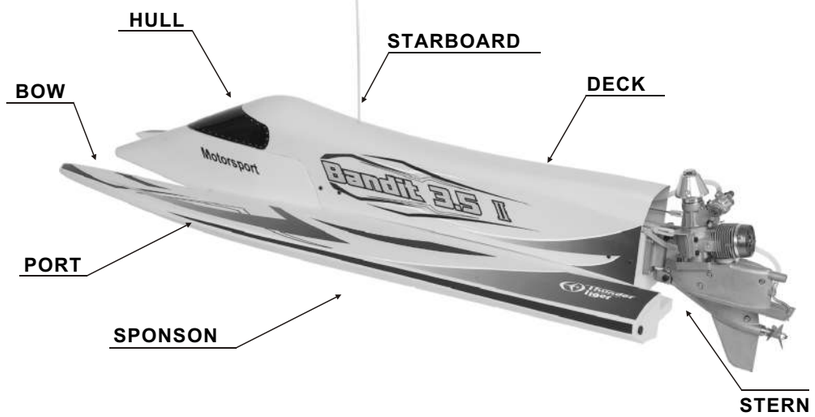
PARTS LISTING



Kit Contents:

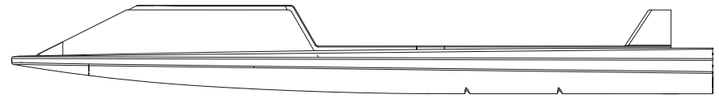
Hull (1)
Stand (1)
Rubber Plug (2)
Switch Boot(1)
Switch Plate (1)
Waterproof Seal (2)
Balloon(2)
EZ Connector (2)
3x3mm Set Screw (2)
Hex Wrench(1)
M2 Nut (2)
M2 Washer (2)
Double Side Tape A (1)
Double Side Tape B (1)
3x20mm Wood Screw (4)
Stopper (1)
90-degree Nipple (1)
180c.c Tank (1)
Cap (1)
Clunk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

BOAT VOCABULARY



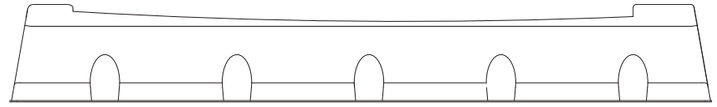
PARTS DRAWINGS

PJ6212G Tunnel Hull (Green)
PJ6212O (Orange)
PJ6212Y (Yellow)



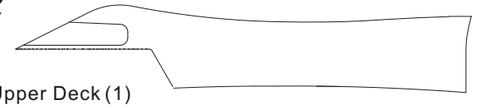
Hull (1)

PJ6213 Display Stand



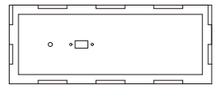
Stand (1)

PJ6214G FRP Upper Deck
PJ6214O
PJ6214Y



Upper Deck (1)

PJ6215 Radio Box



Radio Box(1)

2.3x12mm Washer Wood Screw (4)

PJ6079 Waterproof Set



Switch Plate (1)



Rubber Plug (2)



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)

PJ6219 Hardware



Double Side Tape A(1)



Double Side Tape B (1)



3x20mm Wood Screw (4)

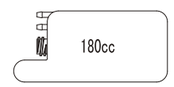
3261 Fuel Tank



Stopper (1)



90-degree Nipple (1)



180c.c Tank (1)



Cap (1)



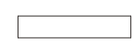
Clunk (1)

Silicone Tube (1)

PJ6082 Recovery Pad



Pad (L/1,R/1)



Double Side Tape (2)

PJ6216 Magnet Set

Magnet Retainer A (6)

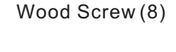


Washer (8)

2x5mm Wood Screw (8)

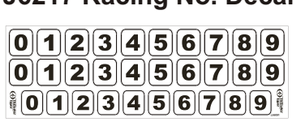
Magnet Retainer B (2)

Magnet (8)



2x8mm Wood Screw (4)

PJ6217 Racing No. Decal



Racing No. Deca l(1)

PJ6218 Linkage

Clevis (2)

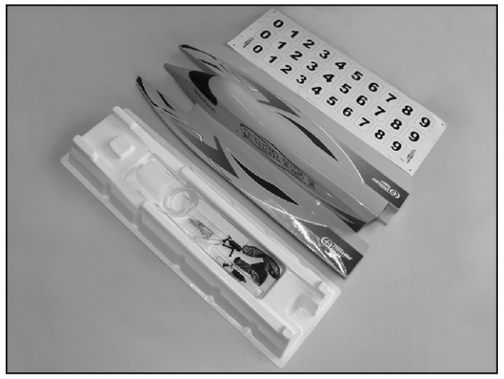


Steering Wire (2)

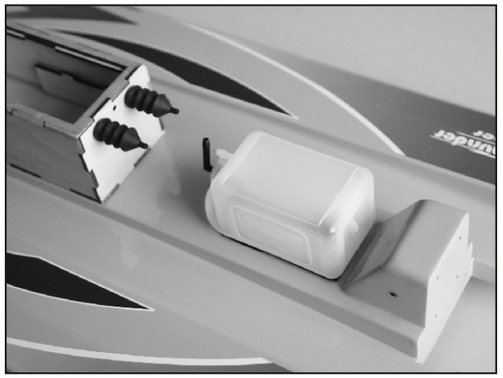
Throttle Wire (1)

Guild Tube (2)

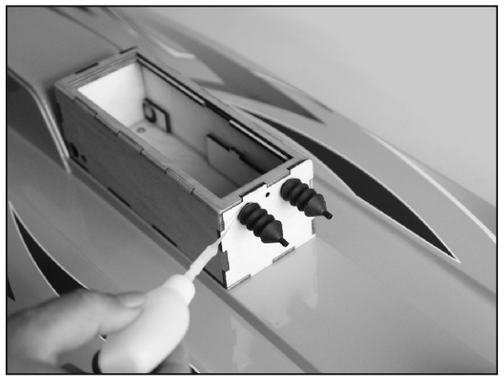
Antenna Tube (1)



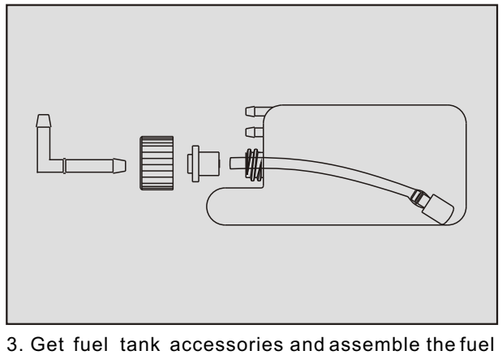
1. Carefully remove your Bandit 3.5 and stand from the box. Locate all enclosed parts from the box. You may put small parts in the display stand.



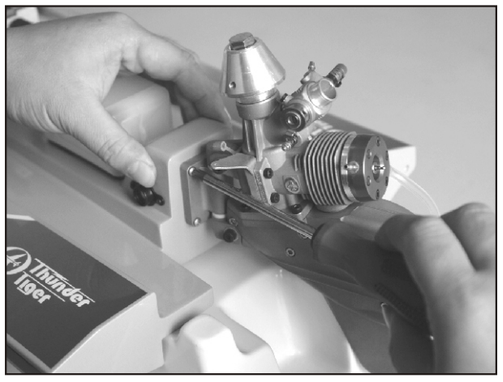
4. Use rubbing alcohol to clean the contact area of fuel tank then secure the fuel tank in place with double side tape.



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



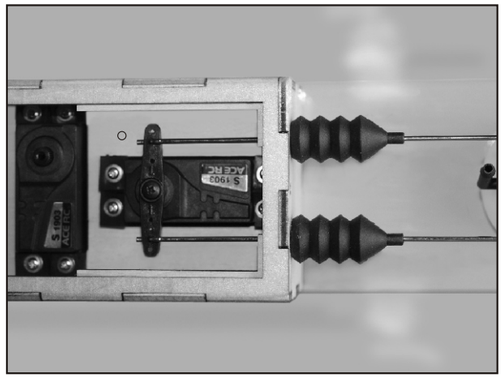
3. Get fuel tank accessories and assemble the fuel tank as shown.



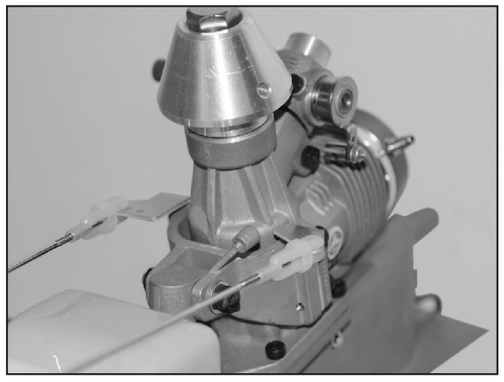
5. The engine mounting holes are pre-drill in factory to fit Thunder Tiger outboard marine engine. Apply epoxy in the hole then secure the engine with four 3x20mm Self-Tapping screws on the transom.



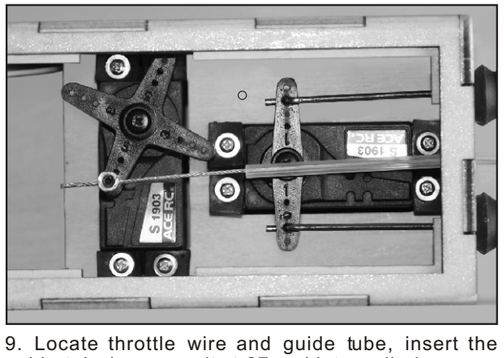
6. Install standard servos with rubber grommets and eyelets in place as shown. As radio box is small, it is suggested to secure the servo in servo tray first then glue the whole servo tray in place. Note: A mark on servo tray should face up.



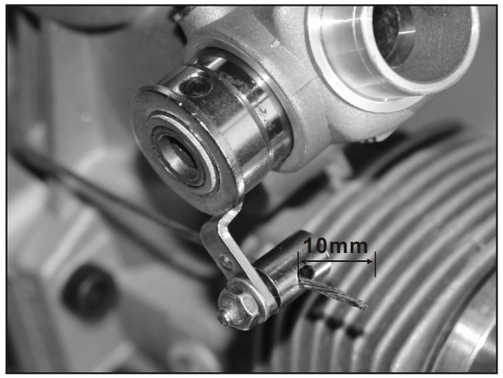
7. Thread the steering wire from inside radio box through the waterproof seal. Thread the other Z-bend end to the servo arm then secure the arm with the screw when servo is in neutral position.



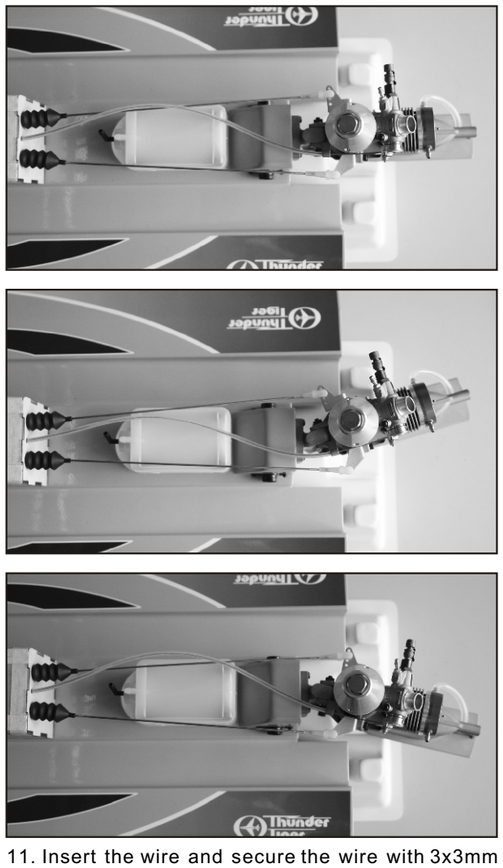
8. Thread the clevis onto the wire and snap to the outboard engine steering arm. Adjust the clevis and make sure the engine is centered. Cut a piece of fuel tube to help secure the clevis as shown.



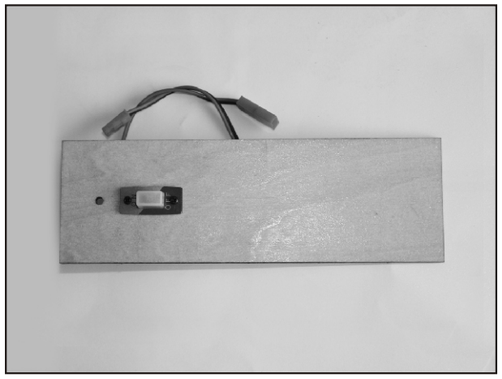
9. Locate throttle wire and guide tube, insert the guide tube(measure it at 27 cm) into radio box case and leave about 5cm in length in the box. Thread the other end to the outboard engine cable housing. You may need to sharpen the tube end for easy access.



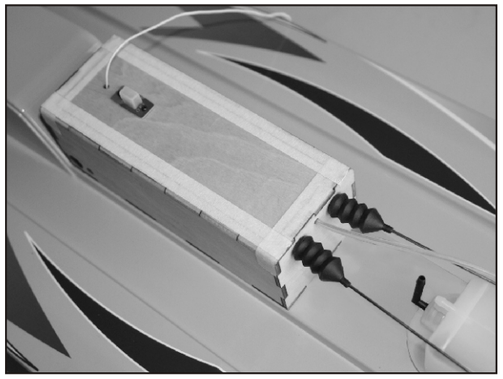
10. Install the EZ connectors both on engine throttle lever and servo horn. You may need to enlarge the throttle lever hole for EZ connector. Use loctite to secure the M2 nut from loosening.



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.

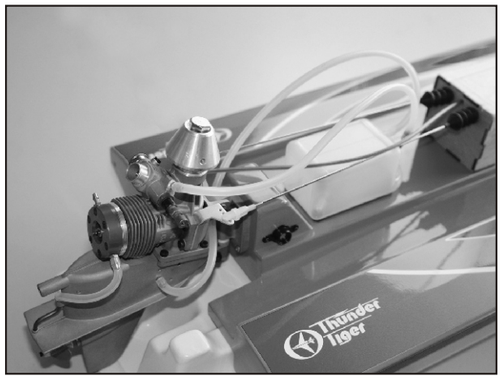


12. Install the switch with the switch boot.

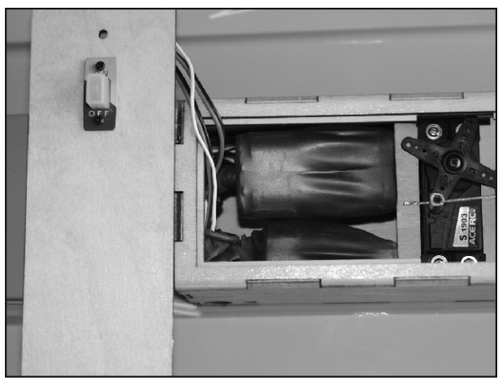


14. Seal the radio box cover with mask tape as shown.

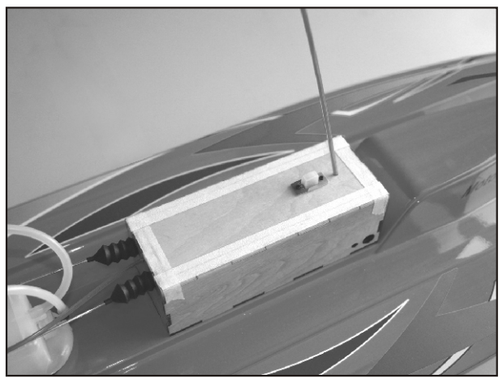




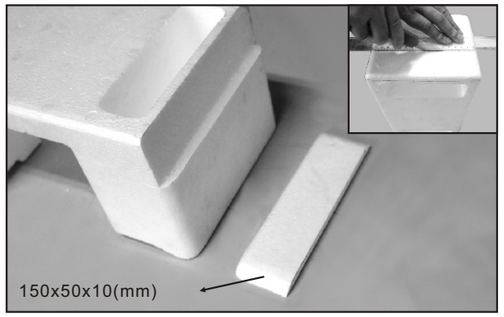
15. Refer to engine manual for fuel line connection. Connect all fuel lines properly. Make sure there is enough fuel line so engine pivot freely.

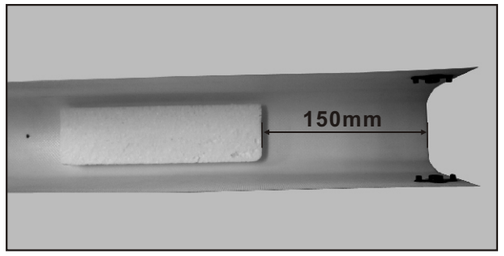


13.Connect all wires properly then install the receiver inside the balloon, use tape or small rubber band to seal the opening. This will help to protect the receiver in case of flipping. Do the same way to the battery case.



16.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.





17.Use hobby knife to cut a piece of foam (dimension LxWxH:150x50x10mm) from the protection insert. Apply the foam inside the canopy with furnished double side tape as indicated. This foam works as a “floating device”.



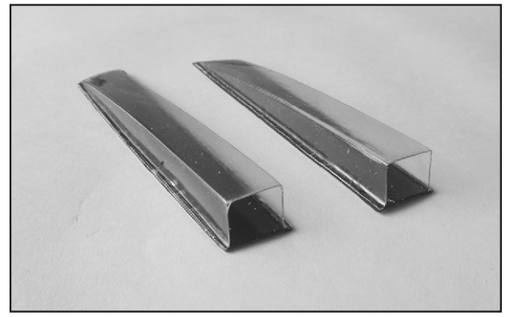
18.Thread the antenna through the canopy and attach to the hull. The super magnet will help to position in place perfectly.



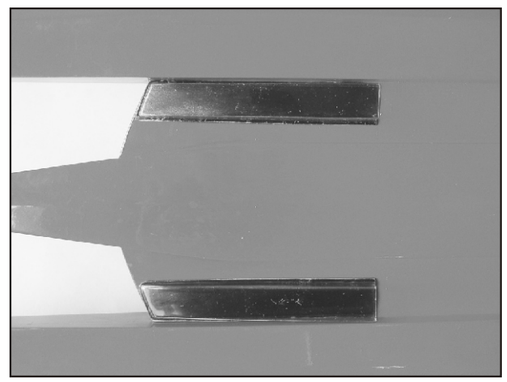
19. Attach the rubber plug at the transom. Make sure it is tight fit in the hole.



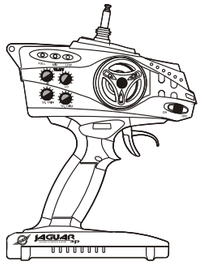
20. Choose and apply the desired racing no. as shown.

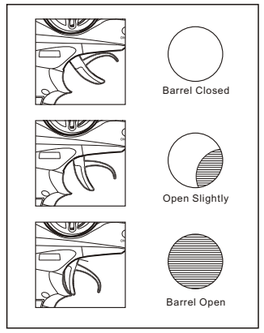


21. Trim the pads as photo shown. It has to trim away the aft portion so water will not stay in the pad. The recovery pad is not necessary unless you run into any Hooking situation. < One of the sponsons digs into the water and spins suddenly the rear of the boat around. Engine is easy killed when this occurs. These pads are not necessary to install if race in clam water. Test this and see if it improves the handling under your driving conditions.



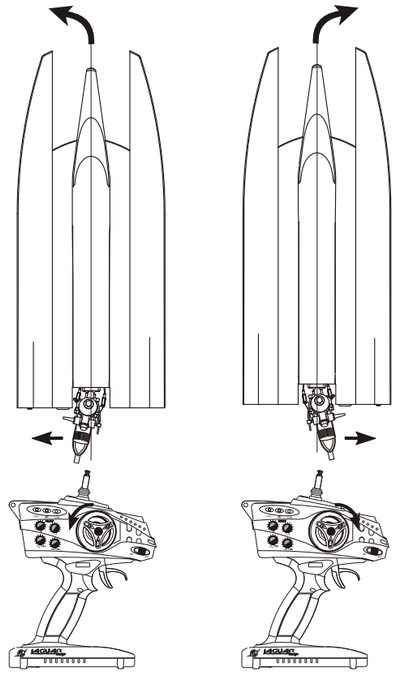
22. Secure the recovery pads in place with double side tape.





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.



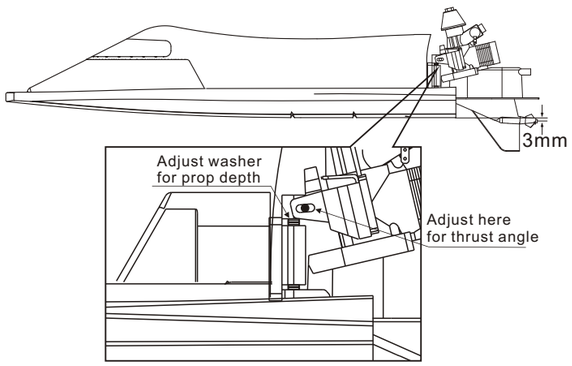
Now you may break-in your outboard marine engine. Refer to engine manual about the engine break-in procedure. 15% nitro fuel is good for boating fun. Of course the higher percentage of Nitro, the more of the power. However, higher nitro means higher price and also will decrease the life of engine.

The suggested initial setting:
Needle Valve : 3-1/2 turns
Idle Needle : 4 turns (w/throttle full opened)

PERFORMANCE TIPS& RACING

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 real. 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 receive 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.