



RAGE

BLACK MARLIN BL

INSTRUCTION MANUAL



Specifications

Hull:	ABS
Hull Length:	23.5" (60cm)
Overall Length:	28" (67cm)
Motor:	2212/3500KV Water-Cooled BL Motor
ESC:	20A Water-Cooled Brushless with Reverse
Transmitter and Receiver:	2-channel, 2.4GHz
Battery:	11.1V 3S 1800mAh 25C LiPo
Charger:	0.5A 3S DC Balancing Charger with AC Power Supply
Servo:	17g Waterproof
Weight:	26.25 oz. (735g)

INTRODUCTION

The Rage™ Black Marlin BL will have you racing across your local pond or lake with brushless power in no time. The impressive speed is generated by the installed powerful brushless 3500KV motor in combination with a 20A Water-Cooled ESC with reverse and the included 3S 1800mAh LiPo battery pack. The great handling of the Black Marlin BL comes from the pre-installed stainless steel trim tabs and turn fins that provide great control and the ability to “turn on a dime”. The BL also has a durable uni-body ABS hull that comes pre-painted with a unique black matte finish and a pre-applied trim scheme that provides a sleek, aggressive look.

The Black Marlin BL is a RTR (Ready-To-Run) boat that arrives 100% factory-assembled out of the box with a 2-channel, 2.4 GHz radio system that features fully proportional steering and throttle control, a 17gram water-proof servo, and a convenient DC charger with an AC power supply that plugs into any electrical outlet. The BL also comes with a display stand that proudly shows it off when you’re not out running it. Plus, even the AA batteries for your transmitter are included, so you can be racing your Black Marlin BL with brushless power across your local pond or lake within minutes of opening the box!

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QUICK START GUIDE

If you're an experienced RC driver or pilot, this list will give you all the information you need to get started driving your new boat as quickly as possible. If this is your first RC vehicle, it is strongly recommended that you read the ENTIRE manual before you attempt to operate your new boat.

Before Boating

1. Before turning on your transmitter, it is important to make sure that the Throttle Ratio Switch at the top of the transmitter is located so that you can read 5:5 on the switch. The transmitter should arrive from the factory fixed in this position, but it is important to confirm before turning on the transmitter. If it is not fixed in this position, it must be moved there before operation. We strongly suggest that once in that position the switch should be locked so that it cannot be moved. For additional details, please see page 9 of this manual.
2. Turn on your transmitter.
3. Install your fully charged batteries in both the boat and transmitter. Make sure you use the Velcro on your battery to securely attach it to the Velcro at the bottom of the boat's hull.
4. Make sure the transmitter throttle trigger and trim are centered, and the switch on the top of the transmitter is positioned toward the rear in the 5:5 position.
5. Connect the battery plug to the ESC plug inside the boat.
6. Make sure the boat is bound to the transmitter. If not, bind the boat to the transmitter using the binding instructions in the included transmitter manual.
7. Make sure all controls – rudder and throttle – move freely and are turning in the correct direction. If not, refer to the included transmitter manual for directions.
8. Adjust the steering rate on your transmitter, as desired.
9. Find a safe and open boating area.
10. Plan a safe boating route for the water and wind conditions.

After Boating

1. Always unplug the battery from the ESC before turning off your transmitter to make sure the boat cannot be controlled by another device.
2. Remove the battery pack from the boat.
3. Make sure the outside of the boat and inside of the hull are completely dried out before storing your boat. Keep the hatch off the boat during storage to ensure that mold and mildew are not allowed to grow and damage the components.
4. Repair and damage or wear to the boat before running it again.
5. Make sure to lubricate the flex shaft after 2 to 3 hours of running time.
6. Make note of lessons learned from each operation of the boat – including trimming needed, and water and wind conditions.

Have fun boating!

WARNING

Please make sure you read the entire instruction manual to become familiar with the features of the Black Marlin before operating. Failure to operate this product correctly can result in damage to the product or personal property – an even cause serious injury.

Please understand that this is a sophisticated hobby product and is not a toy. It must be operated with caution and common sense. Note that it does require some mechanical ability to correctly operate this product. Failure to operate in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt to disassemble or operate with incompatible components or make changes to the product without the approval of HRP Distributing.

This manual contains instructions for safety, operation, and maintenance. It is essential to read and follow all the instructions and warnings in the manual prior to final assembly, setup, or use.

SAFETY PRECAUTIONS

As the owner and user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or property.

- Never attempt to swim to retrieve a stalled RC boat.
- Never operate your boat while standing in water.
- Never operate your boat in the presence of swimmers.
- The running hardware on RC boats can be very sharp, so use caution when working on or around these parts.
- Be cautious with the propeller when the motor is running. Do not come into contact with it or serious injury could result.
- Due to the sharp hardware, do not operate near or around inflatable objects.
- Keep a safe distance in all directions around your boat to avoid possible collisions or injury. This boat is controlled by a radio signal that is subject to interference from many outside sources and could result in a momentary loss of control.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture can damage to unprotected electronics.
- Make sure to keep all chemicals, small parts and anything electrical out of the reach of children.

AGE RECOMMENDATIONS

This product is not a toy. Not for use by children under 14 years of age.

BATTERY SAFETY PRECAUTIONS

Important Note: Lithium Polymer (LiPo) batteries are more volatile than the alkaline, NiCad and NiMH batteries used in other RC applications. All instructions and warnings must be followed exactly to prevent possible personal injury or damage to property, including by fire. By handling, charging, or using the included LiPo battery you assume all potential risks. If you do not agree with these conditions, please return your complete product in new, unused condition to the place of purchase immediately.

Important - Please read the following safety instructions and warnings before handling, charging, or using the included battery.

- You must charge you LiPo battery in a safe area away from any flammable materials.
- Never charge the LiPo battery unattended at any time. When charging the battery you should always remain in constant observation of the battery to monitor the process and react immediately to potential problems you observe.
- After discharging the battery during running the boat you must allow it to cool to ambient room temperature before attempting to recharge. Also, it is NOT recommended that you completely discharge the battery before charging. It is safe to charge partially discharged batteries when using an appropriate LiPo charge
- For charging the battery you must use only the included charger or a suitably compatible LiPo battery charger. Failure to do so may result in a fire causing property damage and/or personal injury. DO NOT use a NiCad or NiMh charger to charge your new LiPo battery.
- If at any time during the charge or discharge process the battery begins to “balloon” or swell, discontinue charging or discharging immediately! Quickly and safely disconnect the battery before placing it in a safe, open area away from flammable materials for observation for at least 15 minutes. Continuing to charge or discharge a battery that has started to “balloon” or swell can result in a fire. Important note: A battery that has “ballooned” or swollen even a small amount must be removed from service immediately and completely.
- Never discharge a LiPo battery below 3V per cell.
- Always disconnect a battery from the ESC when the product is not in use.
- Avoid continually operating the battery to LVC (Low Voltage Cutoff) as this could result in damage to the battery.
- Store the battery partially charged (approximately 50% charged or 3.85V per cell) at room temperature (approximately 68 to 77o Fahrenheit) in a dry area for best result
- When transporting or temporarily storing the battery, the temperature range should be between 40 to 100° F. Do not store the battery or boat in a hot car or in direct sunlight whenever possible or the battery could be damaged or even catch fire.
- LiPo cells should not be discharged to below 3.0V each. In the case of this 3-cell, 11.1V battery you should not allow the voltage to fall below 9.0V during operation.
- Do not over-discharge the LiPo battery, which could result in reduced power, lower run times or complete failure of the battery.

NOTE: The included ESC features a “soft” LVC (Low Voltage Cutoff) that smoothly reduces power to the motor (regardless of your throttle position) to let you know that the voltage to the battery is near the 6.0V minimum and avoid damage to your battery.

However, even before the LVC takes place, if you find that more than typical throttle is needed to power the boat you should drive it back to you and disconnect the battery immediately to avoid over-discharge. It is NOT recommended that you continue to drive the boat after LVC occurs or permanent damage to the battery could occur leading to reduced power and run times with future use. Note that operation of the battery is NOT covered under warranty.

It is also not recommended that you continually run the battery to the “soft” LVC with each operation. You should be aware of the power level of the battery each time you drive the boat and as soon as you find that it requires more throttle than normal to maintain speed you should drive the boat back to you and disconnect the battery immediately. Continually running the battery to the soft LVC can cause permanent damage to the battery, so it is best to keep track of your run time and discontinue use prior to reaching the soft LVC.

Important Note: Do not leave the battery connected to the ESC unless you are ready to run the boat. If the battery is left connected when it is not in use, it will become over-discharged and the battery will become damaged and unusable.

Important Note: Do not store the battery fully charged

For improved safety and longevity of the battery it is recommended that it be stored partially charged for any length of time. Storing the Li-ion battery at approximately 50% charged (approximately 3.85V per cell) is typically best. This will take some management of the charge time and the use of a voltmeter. If you do not have the equipment or experience to maintain the 50% charge, simply be sure not to store the battery fully charged whenever possible. In fact, as long as the battery will be stored at approximately room temperature and for no more than a few weeks before the next use, it is better to store the battery in the discharged state after the last use – as long as it was not over-discharged below the LVC.

LIPO BATTERY WARNING

IMPORTANT NOTE: Lithium Polymer (LiPo) batteries are significantly more volatile than alkaline, NiCd or NiMH batteries also used in RC applications. All instructions and warnings must be followed exactly to prevent property damage and/or personal injury as mishandling of LiPo batteries can result in fire. By handling, charging or using the included LiPo battery you assume all risks associated with LiPo batteries. If you do not agree with these conditions please return the complete product in new, unused condition to the place of purchase immediately.

- You **MUST** charge the LiPo battery in a safe area away from flammable materials.
- **NEVER** charge the LiPo battery unattended at any time. When charging the battery you should **ALWAYS** remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur.
- After discharging the battery you must allow it to cool to ambient/room temperature before recharging.
- To charge the LiPo battery you **MUST** use only the included balance charger or suitable LiPo battery charger. Failure to do so may result in a fire causing property damage and/or personal injury. **DO NOT** use a **NICD** or **NIMH** charger.
- If at any time during the charge or discharge process the battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.

- Store the battery at room temperature, approximately 68–77° Fahrenheit (F), and in a dry area for best results.
- When transporting or temporarily storing the battery, the temperature range should be from approximately 40–100°F. Do not store the battery or model in a hot garage, car or direct sunlight whenever possible. If stored in a hot garage or car the battery can be damaged or even catch fire!
- Do not over-discharge the LiPo battery. Discharging the LiPo battery too low can cause damage to the battery resulting in reduced power, flight duration or failure of the battery entirely.

LiPo cells should not be discharged to below 3.0V each under load. In the case of the 3-Cell/3S 11.1V LiPo battery used to power the Black Marlin, you will not want to allow the battery to fall below 9.0V during operation.

The electronic speed control (ESC) has low voltage cutoff (LVC) protection. When the battery voltage drops below a set point the throttle is gradually reduced. At this point the model will need to be returned to shore and the battery recharged.

CHARGING THE BATTERY

1. Plug the power supply into charger.



2. Plug the power supply into an AC power outlet.



3. Plug the 4-pin balance connector of the battery into the charger. Maintain correct polarity when plugging in 4-pin balance connector.



4. Both red and green LED's will light during charge. Only the green LED will remain lit when charge is complete.



Important Charging Notes

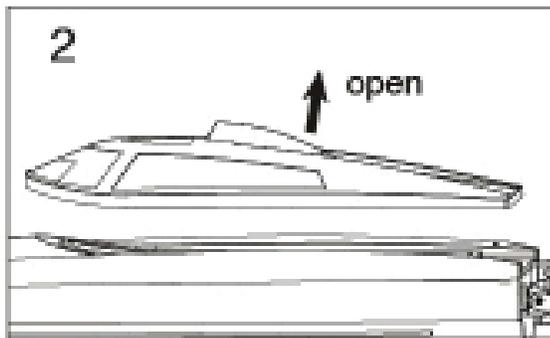
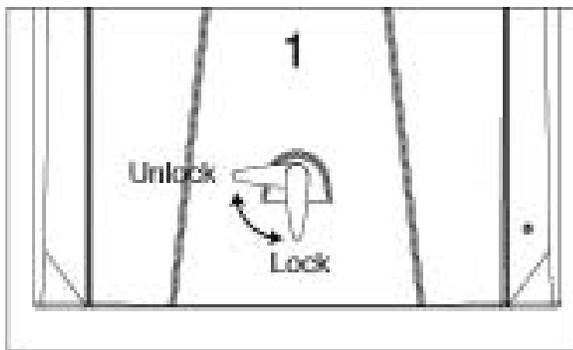
PLACE THE CHARGER ON A FLAT, SMOOTH AND HEAT-RESISTANT SURFACE.

It's important that air is able to circulate through the charger during the charging process in order to keep it from over-heating. It's especially important that the vent openings on the bottom and sides of the charger are not blocked. **DO NOT** place the charger on carpeted or other similar surfaces that may block the vent openings. Also, **DO NOT** place the charger in direct sunlight before, during or after use.

It will take approximately 1 to 1½ hours to fully charge a mostly discharged battery.

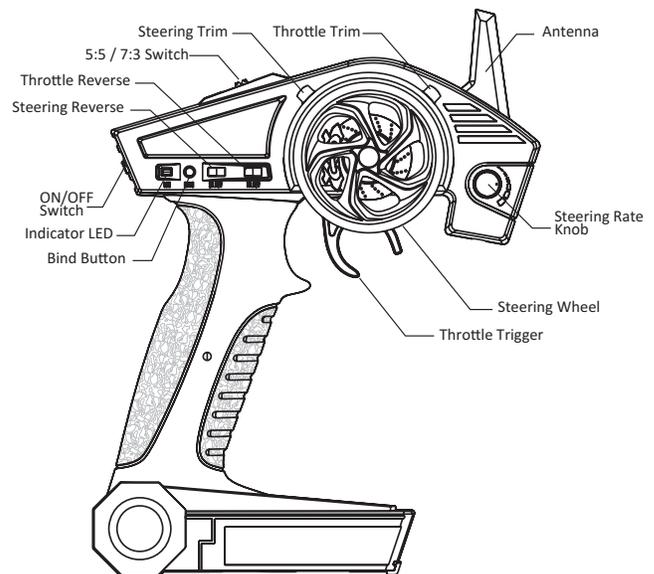
BATTERY INSTALLATION

1. Rotate the hatch lock on the hull cover either clockwise or counter-clockwise to unlock the hatch.
2. Remove the hull cover.
3. Place the battery with the hook fastener side facing down to attach to the loop fastener that is already adhered to the bottom of the boat.
4. Ensure that the wires and plug are facing the rear of the boat.

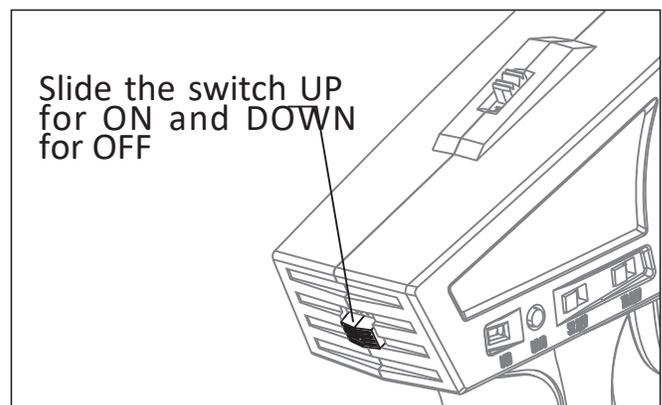


TRANSMITTER OPERATION

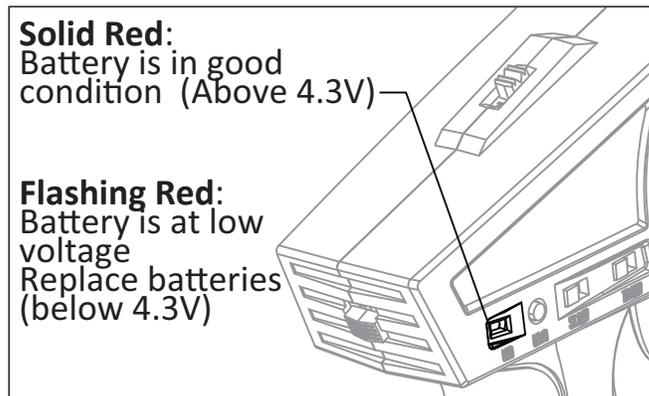
Transmitter Details



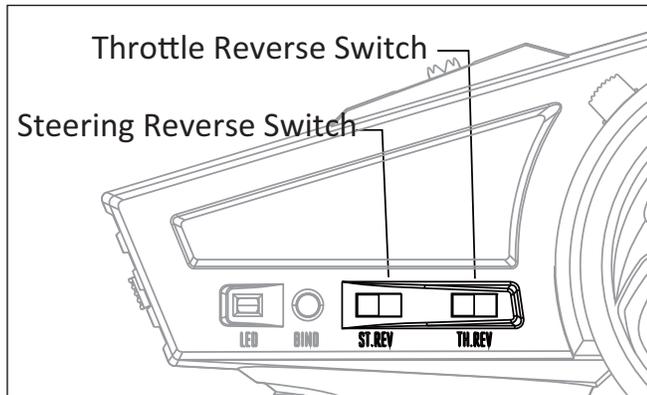
On/Off Switch



Battery LED Monitor

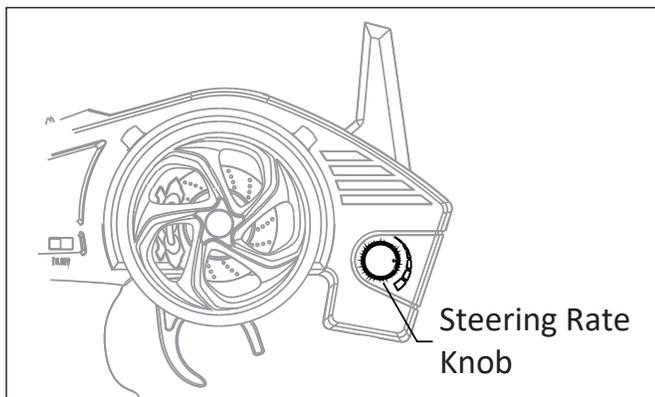


Servo Reversing Switches



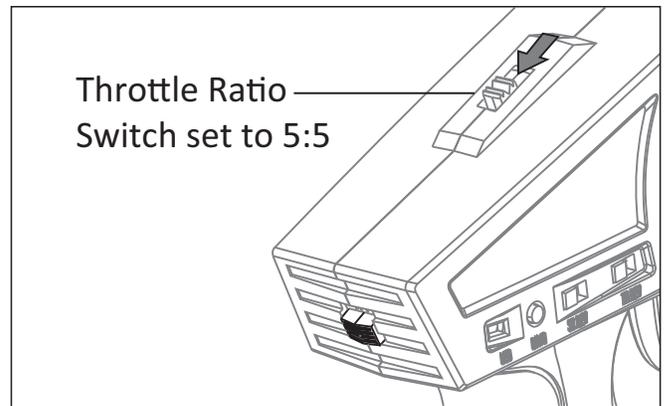
If the direction of travel on the rudder is backwards, slide the steering reverse switch to the other position. It is same principle for the throttle reverse switch.

Steering Rate Knob



Rotating the knob clockwise will give you greater range in rudder movement. Counter-clockwise will reduce the range of rudder movement. Adjust to suit your driving style and preferences.

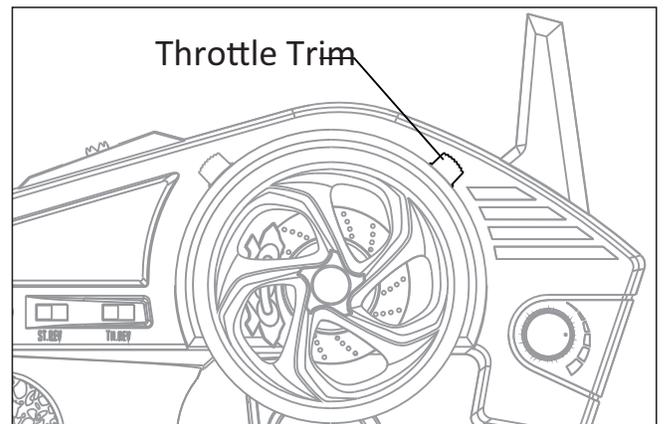
Throttle Ratio Switch



To safely operate the Black Marlin BL, the switch on the top of the transmitter has been fixed in the 5:5 position, so that you should be able to read the 5:5 above the switch location. If, for any reason, the switch is not in this position, you **MUST** move it before operating the boat. It is important to never move the switch from the position where you can read 5:5.

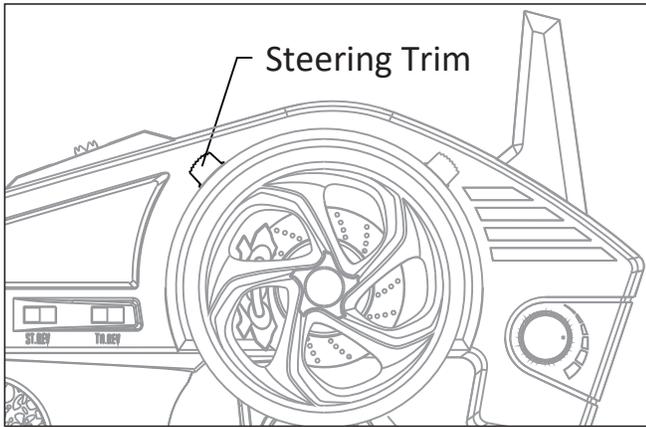
WARNING: The switch on the top of the transmitter should arrive fixed in location so that it can never be moved. It is important to **NEVER** move this switch from this location or the throttle could engage the propeller when the transmitter is turned on and potentially cause personal harm or injury.

Throttle Trim



The throttle trim dial is used to adjust the throttle trim when the throttle stick is released (neutral position). This is typically used to adjust the brakes. Rotating the dial causes the throttle trim (the throttle position at rest) to be changed.

Steering Trim



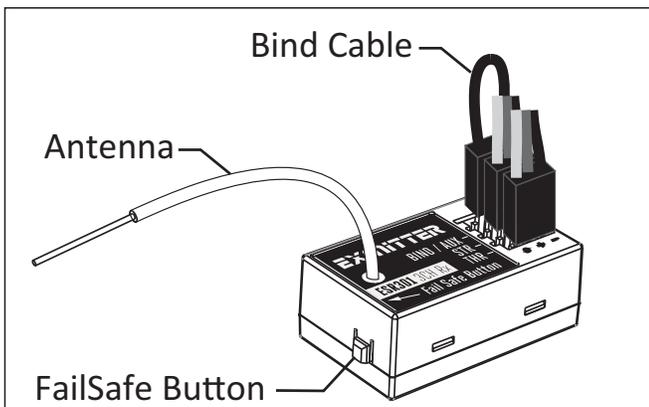
The steering trim dial is used to adjust the steering trim when the wheel is centered.

Rotating the dial changes the steering trim (the steering at rest position). Normally, the steering trim is adjusted until the vehicle tracks straight.

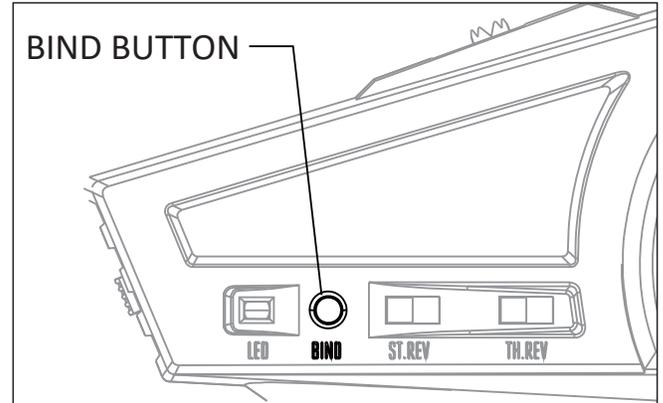
Receiver Connection and Binding

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. When a receiver is bound to a transmitter, the receiver will only respond to that specific transmitter. If you need to rebind for any reason, please follow these steps:

1. With the transmitter switched OFF Insert the bind cable to bind channel slot.



2. Power on the receiver, then turn on the transmitter with pressing on the bind button within 5 seconds.



3. Release the bind button and wait for about 5 seconds.
4. After the receiver LED stops flashing binding is complete.
5. Unplug the bind cable and then you are ready to run.

CAUTION: DO NOT leave the bind cable in the bind channel plug after binding finished, otherwise the binding program will work automatically each time when you power on the receiver.

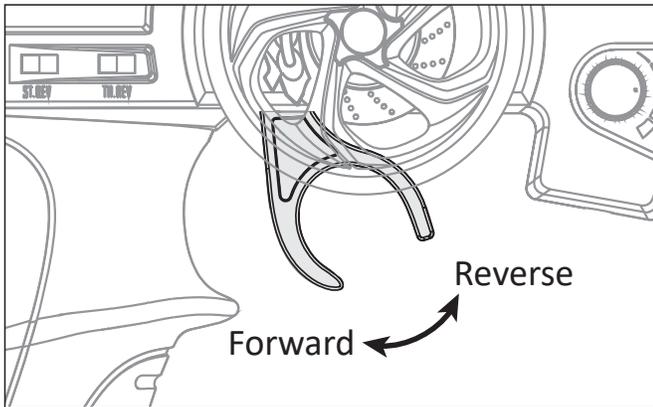
Failsafe Setting

The Black Marlin comes with the receiver failsafe set to NONE. In the event of loss of signal the motor will stop and the vehicle will drift. If the signal is regained normal function will return. If you wish to program the failsafe to a custom setting just follow these simple steps:

1. With both the transmitter and receiver powered ON, press the bind button on the receiver for about 3 seconds.
2. The receiver will enter failsafe setting menu and the receiver LED will flash.
3. You have about 3 seconds to move the controls to the position that you wish to program into failsafe.
4. After the 3 seconds the receiver will save the settings and return to normal mode.
5. If you wish to reset to a different setting, simply repeat above steps.

How to Operate Your Vehicle

- Throttle



Your boat is equipped with a brushless speed control with a reverse function. Pushing the throttle trigger forward will make the motor run in reverse and back the vehicle up.

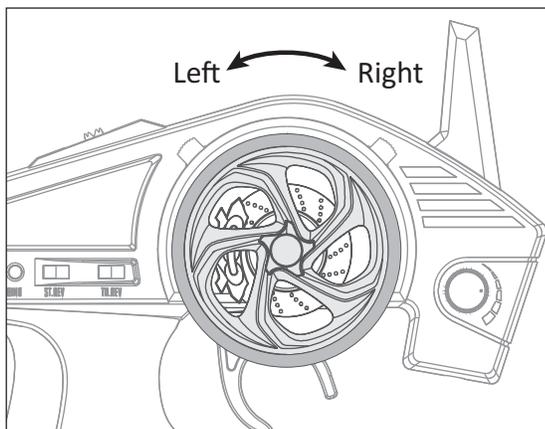
Pull the trigger towards you to make the vehicle go forward.

The proportional speed control means the farther you pull it the faster the vehicle will go.

Release the trigger to stop. Adjust the trim if the motor does not stop when the trigger is released.

CAUTION: When using reverse only use a low power setting to prevent swamping the boat.

- Steering



Rotate the steering wheel clockwise while holding the trigger to turn right.

Rotate the steering wheel counter-clockwise while holding the trigger to turn left.

If the steering is not tight enough, increase the travel volume as described in the following section.

Changing the Travel Adjust Settings

The travel function supports precise endpoint adjustments in each direction for the steering and throttle channels.

1. Hold the trigger in the full brake position while powering on the transmitter. The LED flashes rapidly, indicating the programming mode is active.
2. Throttle End Point: Hold the trigger in the full throttle position. Turn the TH TRIM to adjust the full throttle end point.
3. Brake End Point: Hold the trigger in the full brake position. Turn the TH TRIM to adjust the full brake end point. Return the trigger to the center position.
4. Left Steering End Point: Hold the steering wheel in the full left position. Turn the ST TRIM to adjust the left end point.
5. Right Steering End Point: Hold the steering wheel in the full right position. Turn the ST TRIM to adjust the right end point. Return the steering wheel to the center position.
6. Power off the transmitter to save the travel adjust settings. The minimum Travel is 75%, and the Maximum travel is 150%. The default travel settings are 125% steering and 100% throttle.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in every situation.

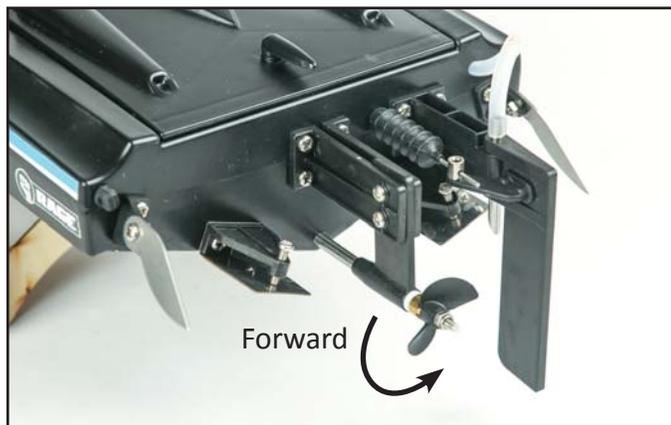
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

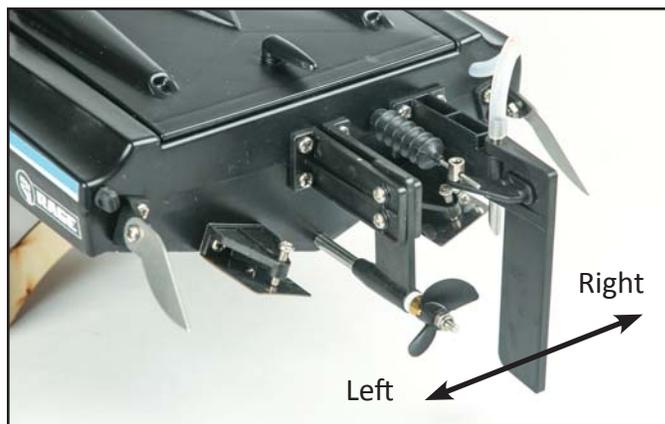
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CHECKING THE RADIO SYSTEM AND GETTING STARTED

1. Power on the transmitter by turning on the switch on the left top end.
2. Connect a fully charged battery by plugging it into the ESC inside the hull.
3. Before placing the boat in the water, test the operation of the motor using the trigger on the transmitter. Also check the switch on the top of the transmitter to make sure it is set to the 5:5 position, allowing full forward and reverse operation of the motor.



4. Before operating your model, make sure the rudder moves to center position once the battery is plugged into the ESC. If not, you will need to adjust the steering trim located on the transmitter to the above left of the wheel. See the transmitter instructions for directions.
5. Once the rudder is centered, make sure it moves in the corresponding direction when you steering wheel is moved to the right or the left.



6. Once you carefully place the boat in the water, begin driving slowly as you become familiar with the operation. Stay near the shoreline at first if you are driving your boat in a pond or lake. Note that steering the boat right or left is completed by turning the steering wheel on the transmitter in the same direction you want the boat to turn. Begin with small movements of the wheel for wider turns and progress to sharper turns as your skills increase.
7. Make sure you avoid objects in the water at all times while operating the boat.
8. To avoid LVC (Low Voltage Cutoff) drive the boat back to shore or the edge of the pool when it begins to lose speed.
9. Power off the disconnecting the battery pack and then turn off the transmitter.
10. Allow the motor, ESC, and battery packs to cool before charging or operating the boat again.

TIP: If it requires a lot of steering trim on the transmitter to have the boat drive straight, return the steering trim to neutral and mechanically center the rudder. To do this, loosen the setscrew at the rudder and center the rudder. Re-tighten the setscrew to secure the rudder pushrod.

NOTICE: Always power on the transmitter before plugging in the ESC. Make sure the transmitter is NOT turned off first or the receiver may pick up stray signals from other devices and run out of control. Never transport the boat with the battery connected to the ESC.

CAUTION: Always keep all body parts, hair, and loose items away from a spinning propeller as items can become easily entangled.

BOATING TIPS

Avoid boating near other watercraft, stationary objects, waves, wakes and other rapidly moving water. Also make sure to avoid operating the boat near wildlife, floating debris, or overhanging trees that come near the surface of the water. You should also be cautious to avoid boating in areas where there are people swimming or in park waterways and fishing areas. Before using on a pond or lake consult local laws and ordinances before choosing a location to run your boat.

You should only drive at maximum speeds when the water conditions are smooth and there is minimal wind.

When running your boat for the first time, it is recommended that you look for calm wind and water conditions so that you can learn how the boat responds to your control.

When making turns, it is suggested that you decrease the throttle slightly to avoid flipping the boat over.

Never operate your boat in less than 3 inches (8cm) of water.

MOTOR CARE

- You can prolong motor life by preventing conditions that overheat the motor. Driving with frequent starts, stops, turns or pushing items in the water can overheat the motor. Other driving conditions like continually running at high speed or through rough water or water vegetation will also cause excessive heat and damage the motor. Make sure you avoid these situations whenever possible.
- Though the ESC is equipped with overheat protection, it does not protect the motor from overheating due to extra resistance from the driving conditions mentioned above.

WHEN FINISHED RUNNING

- First, power off the ESC by disconnecting the battery.
 - Next, turn the transmitter off.
 - Then, remove the battery from the boat.
- TIP:** Always store the boat open – with the hatch removed, so that the inside of the boat is allowed to completely dry. Excessive moisture allowed to remain in the hull can all mold or mildew to grow and damage the components.

NOTICE: When running at full speed in choppy waters, the prop may exit and re-enter the water quickly and repeatedly. This will subject the propeller to some stress which may eventually cause damage to the point it will need to be replaced.

CAUTION: Do not operate this product in vinyl covered or inflatable pools. Sharp components may cause damage to these materials.

CAUTION: Never retrieve your boat from the water in extreme temperatures, turbulence or without supervision.

BOAT MAINTENANCE

Always replace the shaft when it is damaged or shows visible wear. Running the boat with a damaged shaft will not only damage the boat and void the warranty, but could also cause personal injury or property damage.

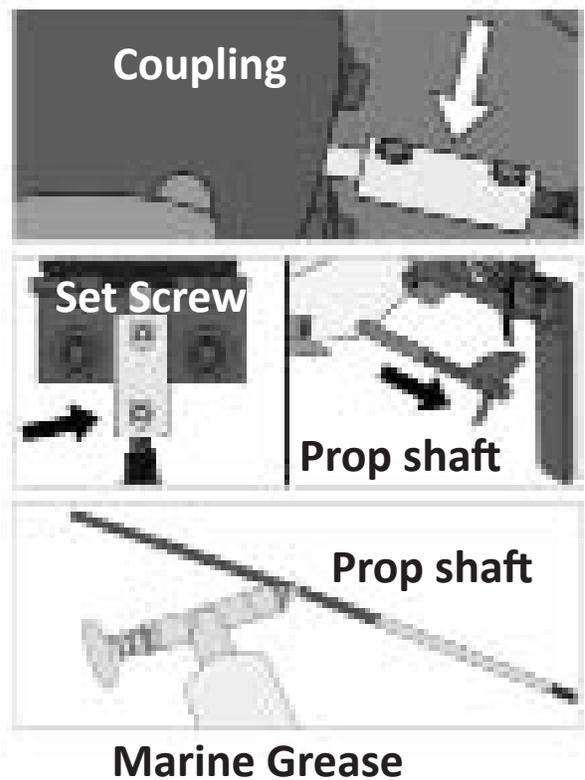
Lubricating the shaft regularly is vital to the life of the drivetrain. The lubricant also acts as a water seal, keeping water from entering the hull through the stuffing box. Make sure this is done after every 2 to 3 hours of operation. Always replace any parts that show excessive wear or damage.

Lubricating or Replacing the Drive Shaft

1. To remove the shaft, first loosen the coupling between the motor and the shaft.
2. Then, loosen the setscrew from the shaft and remove the shaft from the back of the boat.

Tip: Use paper or cloth to hold the shaft when it is being removed.

3. Remove the drive shaft by sliding it out of the stuffing box. Wipe excessive lubricant and other materials from the shaft.
4. Lubricate the full length of the shaft assembly up to the drive dog using marine grease.
5. Apply thread lock to the coupling setscrew. Thread lock will help prevent the shaft from loosening during use.
6. Carefully install or reinstall the drive shaft, ensuring that there is a 1 to 2 mm gap between the prop strut and the drive dog to allow for shaft shrinkage under load.



Notice: Running the boat in salt water could cause some parts to corrode. If you run the boat in salt water, make sure it is rinsed thoroughly in fresh water after each use and lubricate the drive system. Because of the corrosive effects, running the boat in salt water is at the discretion of the owner and will void the boat's warranty.

Problem	Possible Cause	Solution
Boat will not respond to throttle but responds to other controls	Throttle servo travel is lower than 100%	Make sure throttle servo travel is 100% or greater
	Throttle channel is reversed	Reverse throttle channel on transmitter
Extra noise or extra vibration	Damaged propeller, shaft or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
Reduced runtime or boat underpowered	Boat battery charge is low	Completely recharge battery
	Boat battery is damaged	Replace boat battery and follow battery instructions
	Blocking or friction on shaft or propeller	Disassemble, lubricate and correctly align parts
	Boat conditions may be too cold	Make sure battery is warm before use
	Battery capacity may be too low for conditions	Replace battery or use a larger capacity battery
	Drive dog is too close	Loosen coupling at flex shaft and move out flex shaft a small amount
	Too little lubrication on flex shaft	Fully lubricate flex shaft
Boat will not Bind (during binding) to transmitter	Vegetation or other obstacles block the rudder or propeller	Remove boat from the water and obstacles
	Transmitter is too near boat during binding process	Move powered transmitter a few feet from boat, disconnect and reconnect battery to boat
	Boat or transmitter is too close to large metal object	Move boat or transmitter away from large metal object
	Bind plug is not installed correctly	Install bind plug and bind boat to transmitter
	Boat battery/Transmitter battery charge is too low	Replace/recharge batteries
Boat will not link (after binding) to transmitter	ESC switch is off	Power on ESC switch
	Transmitter is too near boat during linking process	Move powered transmitter a few feet from boat, disconnect and reconnect battery to boat
	Boat or transmitter is too close to large metal object	Move boat or transmitter away from large metal object
	Bind plug is left installed	Rebind transmitter to boat and remove bind plug before cycling power
	Boat battery/transmitter battery charge is too low	Replace/recharge batteries
	Transmitter may have been bound to a different model (using different DSM Protocol)	Bind boat to transmitter
Boat tends to dive in the water or takes on water	ESC switch is off	Power on ESC switch
	The boat hull is not completely closed	Dry out the boat and ensure the hatch is fully closed on the hull before returning the boat to the water
	Center of gravity is too far forward	Move batteries back in the hull
Boat tends to turn one direction	Trim tabs are angled incorrectly on the back of the boat	Angle each trim tab up a small amount to lift the bow or down a small amount to lower the bow
	Rudder or rudder trim is not centered	Repair rudder or adjust rudder and rudder trim for straight running when control is at neutral
Boat tends to turn one direction	Vertical fins of trim tabs are angled incorrectly	Angle the fins a small amount right or left so that the boat goes straight when the rudder is at neutral

Rudder does not move	Rudder, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire is damaged or connections are loose	Do a check of wires and connections, connect or replace as needed
	Transmitter is not bound correctly or the incorrect model was selected	Re-bind or select correct model in transmitter
	BEC (Battery Elimination Circuit) of the ESC is damaged	Replace ESC
	ESC switch is off	Power on ESC switch
Controls reversed	Transmitter settings are reversed	Do the Control Direction Test and adjust controls on transmitter appropriately
Motor or ESC overheats	Blocked water cooler tubes	Clean or replace water tubes
Motor power pulses then motor loses power	ESC uses default soft Low Voltage Cut-off (LVC)	Recharge boat battery or replace battery that is no longer performing
	Weather conditions might be too cold	Postpone until weather is warmer
	Battery is old, worn out or damaged	Replace battery
	Battery C rating might be too small	Use recommended battery

REPLACEMENT PARTS LIST

Part Number	Part Description
RGRB1205	Black Marlin Brushless RTR Boat
RGRB1230	Painted/Decorated hull
RGRB1231	2212/3500KV Brushless Motor
RGRB1232	Water-Cooling Motor Mount
RGRB1233	Brushless Motor Coupler
RGRB1234	20A Brushless ESC (Water-Cooled)
RGRB1235	11.1V 3S 1800mAh LiPo Battery w/ T-Plug
RGRB1236	2.4Ghz 2 Ch. Receiver
RGRB1237	2.4Ghz 2 Ch. Transmitter
RGRB1238	DC Balance Charger
RGRB1239	AC Power Supply for RGRB1238
RGRB1212	Canopy Latch
RGRB1213	Rudder Pushrod Set
RGRB1214	Rudder Assembly
RGRB1215	Prop Strut Set
RGRB1216	Equipment Mount Set
RGRB1217	Drive Shaft Guide
RGRB1218	Propeller w/Drive Shaft
RGRB1219	Propellers (3)
RGRB1224	Rudder Servo

LIMITED WARRANTY

Warranty Period: Rage R/C warrants that the Black Marlin ("Product") will be free from original factory defects in materials and workmanship upon purchase ("Warranty Period").

What is Not Covered - This warranty is not transferable and does not cover (a) cosmetic damage, (b) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (c) modification to any part of the Product, (d) attempted service by anyone other than a Rage R/C authorized service center, or (e) Product not purchased from an authorized Rage R/C dealer.

OTHER THAN THE EXPRESS WARRANTY ABOVE, RAGE R/C MAKES NO OTHER WARRANTY OR REPRESENTATION, AND THEREFORE DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND SUITABILITY FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL MEET THE REQUIREMENTS OF THEIR INTENDED USE.

Purchaser's Remedy - Rage R/C's sole obligation and purchaser's sole and exclusive remedy shall be that Rage R/C will, at its option, either (a) service, or (b) replace, any Product determined by Rage R/C to be defective. Rage R/C reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Rage R/C. Proof of purchase is required for all warranty claims.

SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

Limitation of Liability - RAGE R/C SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF RAGE R/C HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Further, in no event shall the liability of Rage R/C exceed the individual price of the Product on which liability is asserted. As Rage R/C has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

Law - These terms are governed by Utah law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Rage R/C reserves the right to change or modify this warranty at any time without notice.

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