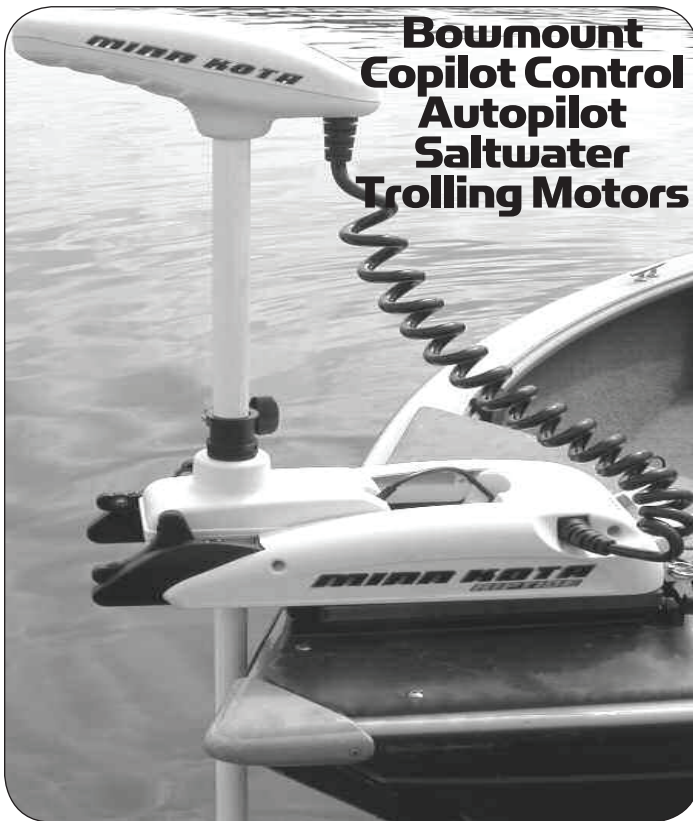




Master User Manual for RIPTIDE ST



Bowmount Copilot Control Autopilot Saltwater Trolling Motors

NOTE: DO NOT RETURN YOUR MINN KOTA MOTOR TO YOUR RETAILER. YOUR RETAILER IS NOT AUTHORIZED TO REPAIR OR REPLACE THIS UNIT. YOU MAY OBTAIN SERVICE BY:

- CALLING MINN KOTA AT: 1-800-227-6433 OR 1-507-345-4623;
- RETURNING YOUR MOTOR TO THE MINN KOTA FACTORY SERVICE CENTER;
- SENDING OR TAKING YOUR MOTOR TO ANY MINN KOTA AUTHORIZED SERVICE CENTER ON ENCLOSED LIST.

PLEASE INCLUDE PROOF OF PURCHASE, SERIAL NUMBER AND PURCHASE DATE FOR WARRANTY SERVICE WITH ANY OF THE ABOVE OPTIONS.

PLEASE THOROUGHLY READ THIS USER MANUAL. FOLLOW ALL INSTRUCTIONS AND HEED ALL SAFETY & CAUTIONARY NOTICES BELOW. USE OF THIS MOTOR IS ONLY PERMITTED FOR PERSONS THAT HAVE READ AND UNDERSTOOD THESE USER INSTRUCTIONS. MINORS MAY USE THIS MOTOR ONLY UNDER ADULT SUPERVISION.

SERIAL NUMBER _____

PURCHASE DATE _____

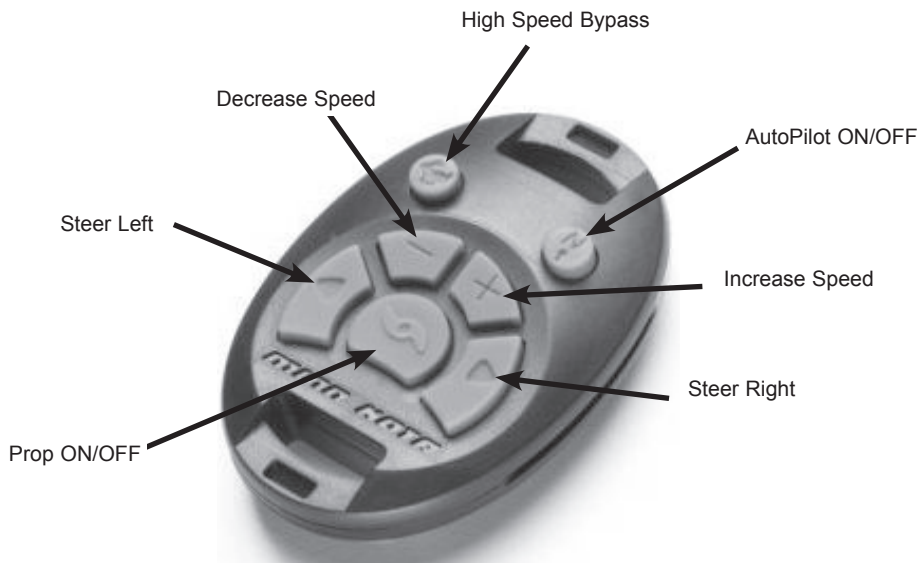
Riptide ST

CoPilot

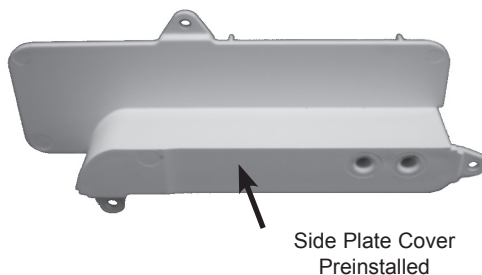
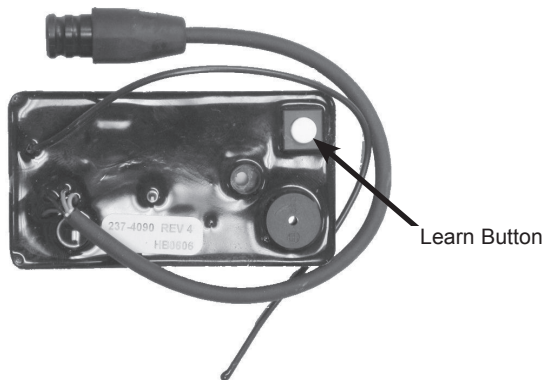
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SYSTEM COMPONENTS

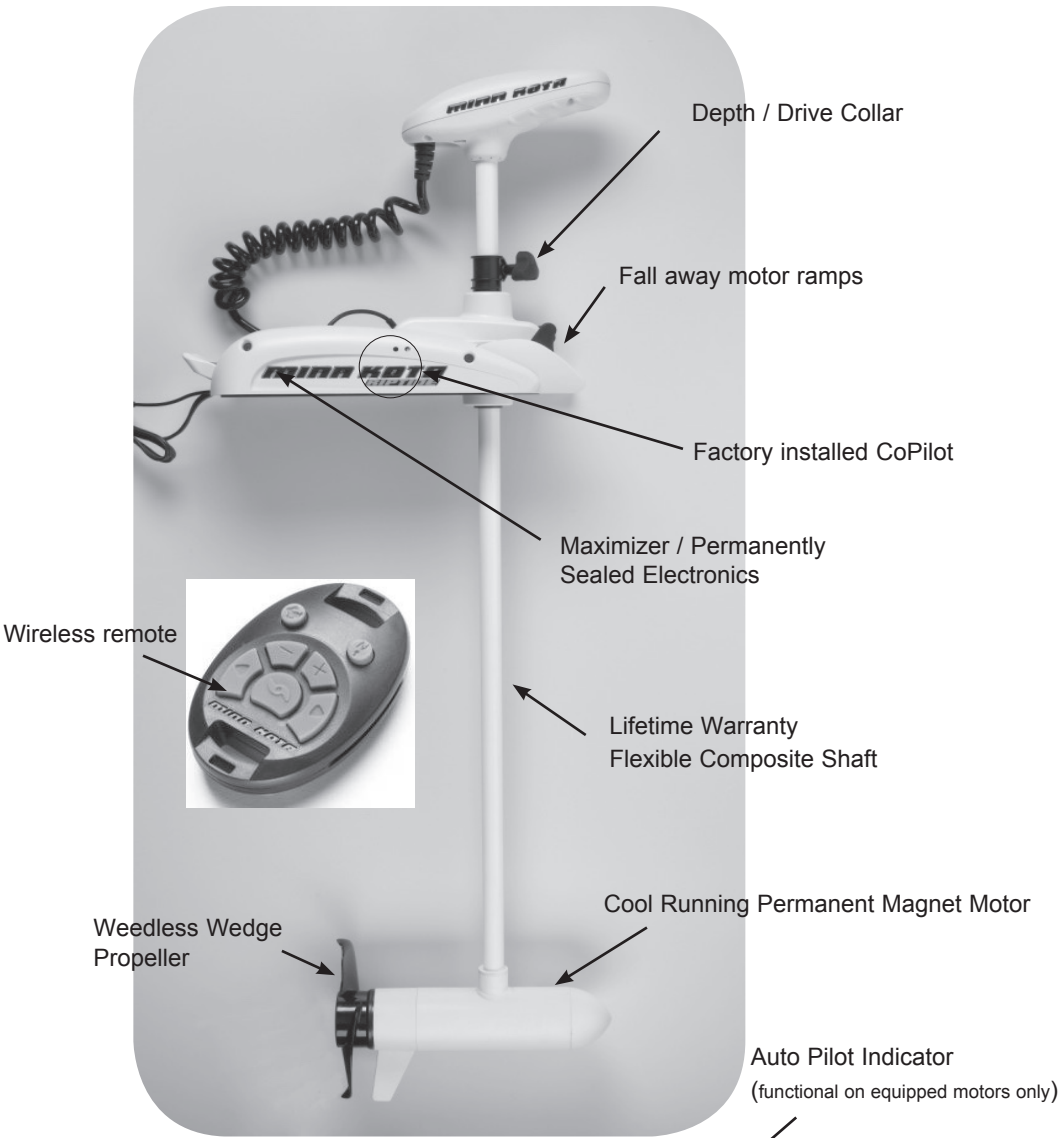
COPILOT RIPTIDE ST REMOTE



COPILOT RIPTIDE ST RECEIVER Preinstalled in sideplate

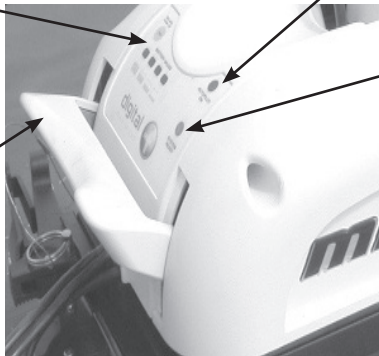


Specifications subject to change without notice.



Push Button Battery Gauge

Tilt Lock Lever Allows Easy Retraction To Storage Position

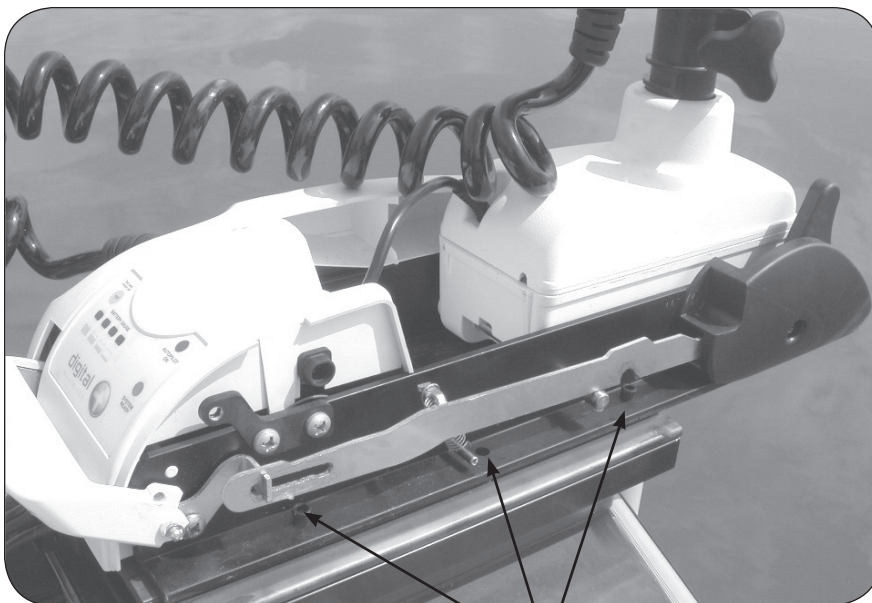


System Ready Indicator

INSTALLATION OF THE RIPTIDE ST:

We recommend that you have another person help with this procedure. Tools required: 7/16" wrench, #3 phillips screwdriver and electric drill with a 9/32" bit.

1. Remove the four sideplate screws. Remove the right sideplate and swing the left sideplate out and away from the base extrusion.
2. Place the motor on the bow of the boat in the deployed position:
 - We recommend that the motor be mounted as close to the centerline of the boat as possible.
 - Make sure the bow area under the mounting location is clear and unobstructed for drilling and accessible for you to attach the nuts and washers.
 - Make sure the mount is positioned so that the shaft is out beyond the rub strip of the boat by 1 1/2". The lower unit, as it is lowered into the water or raised into the boat, must not encounter any obstructions.
3. Once in position, mark four of the six holes provided in the bow mount base for drilling. If possible, use the four holes that are farthest apart. Drill through the marked holes using a the 9/32" drill bit.
4. Mount the plate to the bow using the provided bolts, nuts and washers.
5. Replace the sideplates and sideplate screws.



Mount Bracket so that during stow and deploy, the shaft will not encounter boat's rub strip.

Mounting Holes
Le fait de Monter des Trous

CAUTION: MAKE SURE YOU MOUNT YOUR MOTOR ON A LEVEL SURFACE. USE THE RUBBER WASHERS TO CREATE A LEVEL SURFACE — IF NECESSARY.

Attention:

- Avoid running your motor with the propeller outside of the water. This may result in injuries from the rotating propeller.
- It is recommended to set the speed selector to zero and place the motor in the deployed position prior to connecting power cables. Disconnect power cables prior to stowing.
- Always ensure that the power cables are not twisted or kinked; and that they are securely routed to avoid a safety or trip hazard. Ensure cables are unobstructed in all locations to avoid damaging the wire insulation. Damage to the insulation could result in failure or injury.
- Always inspect the insulation of the power cables prior to use to ensure they are not damaged.
- Disregarding these safety precautions may result in an electrical short of the battery(s) and/or motor. Always disconnect the motor from the battery(s) before cleaning or checking the propeller.
- Avoid submerging the complete motor as water may enter the lower unit through control head and shaft. Water in the lower unit may cause an electrical short and damage the lower unit. This damage will not be covered by warranty.

Caution!

- Always operate the motor in a safe distance away from obstructions. Never approach the motor when the propeller is running. Contact with a spinning propeller may endanger you or others.
- Always exercise safe practices when using your motor; stay clear of other watercrafts, swimmers, and any floating objects. Always obey water regulations applicable to your area of operation.
- Never operate the motor while under the influence of alcohol, drugs, medication, or other substances which may impair your ability to safely operate equipment.
- This motor is not suitable for use in strong currents exceeding the thrust level of the motor.

The constant noise pressure level of the motor during use is less than 70dB(A). The overall vibration level does not exceed 2,5m/sec².

GENERAL:

System Ready (green): The motor is equipped with a system ready indicator. Indicator light will be on when motor is deployed and power is applied to the motor. When the motor is properly stowed the indicator light will go off indicating all power has been turned off to the motor. If this indicator light does not come on when deployed, check that motor is connected to battery properly and motor is completely deployed. If indicator light does not go off when stowed, be sure that stow/deploy lever is fully latched and locked into the stowed position.

TO STOW:

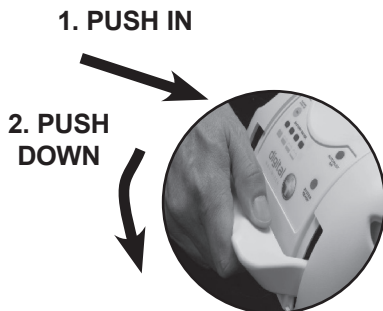
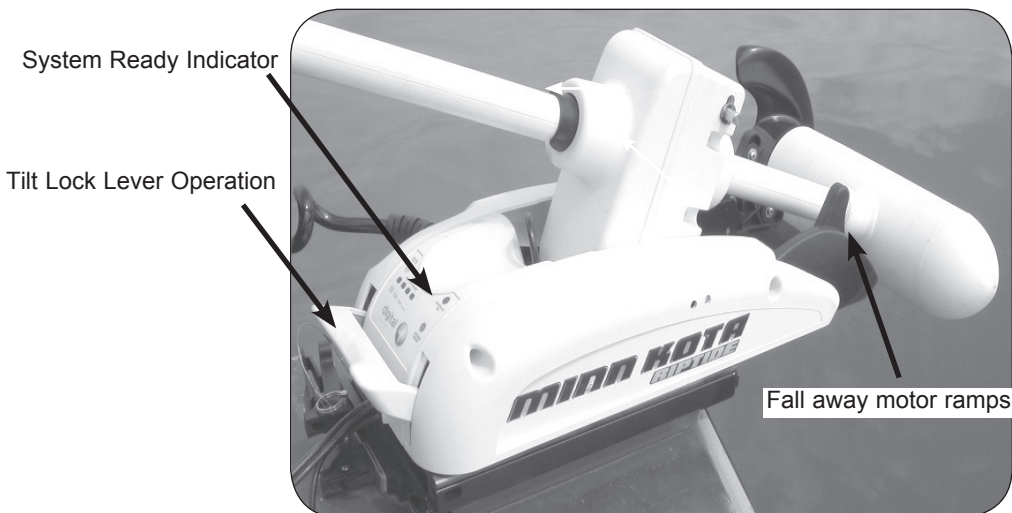
Push and hold the stow/deploy lever down. Gently tilt and pull the composite shaft or control head until the motor engages the motor ramps. Motor should rest on the motor ramps and lock into place. The stow/deploy lever should latch automatically into the stowed position. System ready indicator light (green) **MUST** go off for the motor to be stowed properly.

TO DEPLOY:

Push in and rotate the stow/deploy lever down. Gently slide the motor out from the ramps. Lower the motor to the desired depth making sure it clicks into a secure, vertical position. System ready indicator light (green) will be lit indicating motor is ready for operation.

TRANSPORTATION:

In conditions where the stowed motor is subject to high levels of shock or vibration, take care to provide a secure stow. Move the depth collar snug against the steering motor and tighten.



WARNING : WHEN RAISING OR LOWERING MOTOR, KEEP FINGERS CLEAR OF ALL HINGE AND PIVOT POINTS AND ALL MOVING PARTS.

AUTOPILOT™ CONTROLS: AUTOPILOT ON EQUIPPED MOTORS ONLY

The MINNKOTA AutoPilot uses a magnetic compass and a microprocessor chip to keep the trolling motor pointed in the direction you want to go. Each time the wind or water current moves the boat off course, the AutoPilot senses the change and steers itself back to the original heading. The AutoPilot direction is set every time a steering change is made. To change direction, steer until the control head points to the desired course. The AutoPilot will pull the bow of the boat around and correct automatically until the boat is moving in the direction you chose.

1. This unit has an automatic steering shutdown for safety. In conditions where an obstruction prevents the trolling motor from turning, or in extremely windy conditions, the automatic steering may stop. Any steering input on the foot pedal will reset the system to normal.
2. When the AutoPilot is on and the trolling motor is pulled out of the water to the stow position, the steering motor will continue to run until the motor is stowed properly. Once the motor is stowed properly, AutoPilot will turn off and the system ready indicator will go off.
3. This unit uses a magnetic compass to detect direction of travel. The compass can be adversely affected by magnets or large, ferrous metal objects near (within 12" of) the trolling motor control head.
4. After steering to a new direction, there is a short delay before the direction is locked in to allow the compass to stabilize.
5. Obstructions on the propeller may cause excessive vibration of the motor head. This vibration can cause the compass to wander and erratic steering to occur. Clear the obstruction to return the motor to normal operation.
6. When broad speed changes are made, the motor heading may change slightly. This is normal.

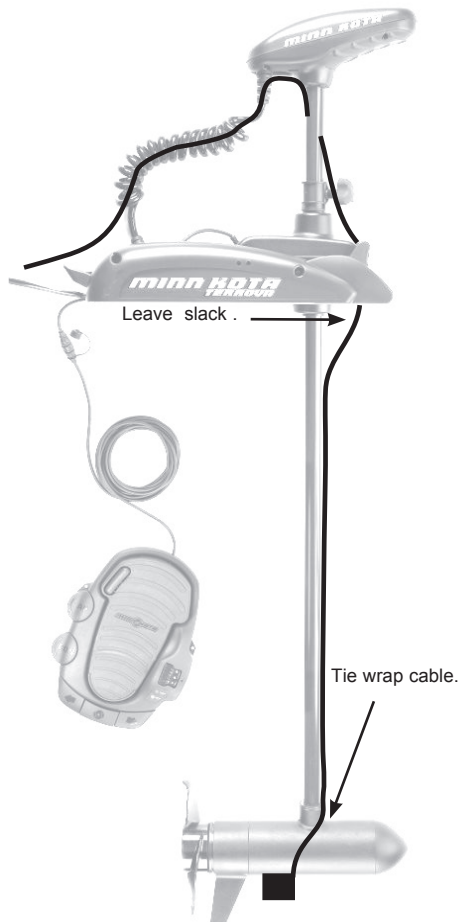
DEPTH ADJUSTMENTS:

Firmly grasp and hold the composite shaft above the PowerDrive housing. Loosen the depth/drive collar knob until the shaft slides freely. Raise or lower the motor to the desired depth. Tighten the depth/drive collar knob to secure the motor in place.

EXTERNAL TRANSDUCER INSTALLATION:

Transducer cables should be routed through the coil cable and handle as shown. Leave enough slack for proper deployment and retraction. Mount transducer according to transducer instructions.

NOTE: An external transducer is not included with your trolling motor.



BATTERY INFORMATION:

The motor will operate with any deep cycle marine 12 volt battery

[24 volts require two and 36 volts requires three]. For best results, use a deep cycle MinnKota marine battery with at least an 115 ampere hour rating. The actual ampere draw is subject to your particular environmental conditions and operation requirements.

Maintain battery at full charge. Proper care will significantly improve the battery life. Failure to recharge lead-acid batteries (within 12-24 hours) is the leading cause of premature battery failure. For best results, use a variable rate MinnKota charger.

If you are using a crank battery to start a gasoline outboard, we recommend that you use a separate deep cycle marine battery for your trolling motor.

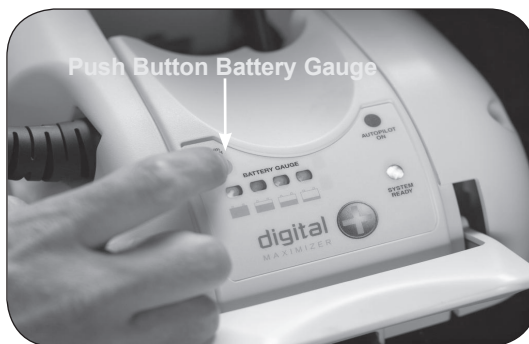
Advice regarding batteries:

Never connect the (+) and the (-) terminals of the battery together. Take care that no metal object can fall onto the battery and short the terminals. This would immediately lead to a short and utmost fire danger.

Recommendation: Use battery boxes and covered battery terminal clamps like Minn Kota accessory #MK-BC-1.

The motor is equipped with a battery gauge. This LED gauge provides an accurate display of the remaining charge in the battery. The gauge is only accurate when the motor is off. The gauge reads as:

•Four lights = full charge •Three lights = good charge •Two lights = low charge •One light = recharge.



BATTERY CONNECTION

12 Volt Systems:

1. Make sure that the motor is switched off (speed selector on "0").
2. Connect positive (+) red lead to positive (+) battery terminal.
3. Connect negative (-) black lead to negative (-) battery terminal.
4. For safety reasons do not switch the motor on until the propeller is in the water.

24 Volt Systems:

1. Make sure that the motor is switched off (speed selector on "0").
2. Two 12 volt batteries are required.
3. The batteries must be wired in series, only as directed in wiring diagram, to provide 24 volts.
 - a. Connect a connector cable to positive (+) terminal of battery 1 and to negative (-) terminal of battery 2.
 - b. Connect positive (+) red lead to positive (+) terminal on battery 2.
 - c. Connect negative (-) black lead to negative (-) terminal of battery 1.
4. For safety reasons do not switch the motor on until the propeller is in the water.

36 Volt Systems:

1. Make sure that the motor is switched off (speed selector on "0").
2. Three 12 volt batteries are required.
3. The batteries must be wired in series, only as directed in wiring diagram, to provide 36 volts.

- a. Connect a connector cable to positive (+) terminal of battery 1 and to negative (-) terminal of battery 2.
 - b. Connect a connector cable to positive (+) terminal of battery 2 and to negative (-) terminal of battery 3.
 - c. Connect positive (+) red lead to positive (+) terminal on battery 3.
 - d. Connect negative (-) black lead to negative (-) terminal of battery 1.
4. For safety reasons do not switch the motor on until the propeller is in the water.

If installing a leadwire plug, observe proper polarity and follow instructions in your boat owner's manual.

See wiring diagram on following pages.

- **IMPROPER WIRING OF 24 VOLT SYSTEM COULD CAUSE BATTERY EXPLOSION!**
- **KEEP LEADWIRE WING NUT CONNECTION TIGHT AND SOLID TO BATTERY TERMINALS.**
- **LOCATE BATTERY IN A VENTILATED COMPARTMENT.**

MAXIMIZER™:

The built-in Maximizer's electronics create pulse width modulation to provide longer running time and extended battery life. With the Maximizer speed control, you may, in some applications, experience interference in your depth finder display. We recommend that you use a separate deep cycle marine battery for your trolling motor and that you power the depth finder from the starting / cranking battery. If problems still persist, call our service department at 1-800-227-6433.

BOAT RIGGING AND PRODUCT INSTALLATION:

For safety and compliance reasons, we recommend that you follow American Boat and Yacht Council (ABYC) standards when rigging your boat. Altering boat wiring should be completed by a qualified marine technician. The following specifications are for general guidelines only:

CAUTION: These guidelines apply to general rigging to support your Minn Kota motor. Powering multiple motors or additional electrical devices from the same power circuit may impact the recommended conductor gauge and circuit breaker size. If you are using wire longer than that provided with your unit, follow the conductor gauge and circuit breaker sizing table below. If your wire extension length is more than 25 feet we recommend that you contact a qualified marine technician.

An over-current protection device (circuit breaker or fuse) must be used. Coast Guard requirements dictate that each ungrounded current-carrying conductor must be protected by a manually reset, trip-free circuit breaker or fuse. The type (voltage and current rating) of the fuse or circuit breaker must be sized accordingly to the trolling motor used. The table below gives recommended guidelines for the circuit breaker sizing.

Reference:

United States Code of Federal Regulations: 33 CFR 183 - Boats and Associated Equipment

ABYC E-11: AC and DC Electrical Systems on Boats.

*Conductor Gauge and Circuit Breaker Sizing Table

Motor Thrust	Max Amp Draw	Circuit Breaker	Wire Extension Length				
			5 feet	10 feet	15 feet	20 feet	25 feet
30#	30	50 Amp @ 12 VDC	10 AWG	10 AWG	8 AWG	6 AWG	4 AWG
40#, 45#	42		10 AWG	8 AWG	6 AWG	4 AWG	4 AWG
50#, 55#	50	60 Amp @ 12 VDC	8 AWG	6 AWG	4 AWG	4 AWG	2 AWG
70#	42	50 Amp @ 24 VDC	10 AWG	10 AWG	8 AWG	8 AWG	6 AWG
80#	56	60 Amp @ 24 VDC	8 AWG	8 AWG	8 AWG	6 AWG	6 AWG
101#	46	50 Amp @ 36 VDC	8 AWG	8 AWG	8 AWG	8 AWG	8 AWG
112#	52	60 Amp @ 36 VDC	8 AWG	8 AWG	8 AWG	8 AWG	8 AWG
E-Drive	40	50 Amp @ 48 VDC	10 AWG	10 AWG	10 AWG	10 AWG	10 AWG

*The conductor and circuit breaker sizing table above is only valid for the following assumptions.

1. No more than three (3) conductors are bundled together inside a sheath or conduit outside of engine spaces.
2. Each conductor has 105 degree C temp rated insulation.
3. No more than 5% voltage drop allowed at full motor power based on published product power requirements.

"BATEAU GRÉEMENT ET PRODUIT DE L'INSTALLATION :"

"Pour des raisons de sécurité et de conformité, nous recommandons de suivre les normes de l'American Boat And Yacht Council (ABYC) lorsque trucher votre bateau. Modifier le câblage du bateau doit être complété par un technicien marin qualifié. Les spécifications suivantes sont uniquement des directives générales :"

"Avertissement : Ces directives s'appliquent au gréement générale à l'appui de votre moteur Minn Kota."
 "Alimenter plusieurs moteurs ou des dispositifs électriques supplémentaires depuis le même circuit de puissance peut influencer la taille recommandée de la jauge du conducteur et disjoncteur. Si vous utilisez fil plus long que celui fourni avec votre unité, suivre le conducteur jauge et le disjoncteur dimensionnement tableau ci-dessous. Si votre fil longueur d'extension est plus de 7.5 metres nous recommandons que vous contacter un technicien marin qualifié."

"Un dispositif de protection de surintensité (disjoncteur ou fusible) doit être utilisé. Les exigences de "la Garde-Côte américain disent que chaque conducteur sans fondement de porteurs de courant doit être protégé par un disjoncteur mise en circuit, à déclenchement libre ou un fusible. Le type (tension et courant nominal) du fusible ou disjoncteur doit être dimensionné en conséquence pour le moteur utilisé. Le tableau ci-dessous donne les directives pour le calibrage de disjoncteur."

"Référence :"

"United States Code of Federal Regulations : CFR 33 183 – bateaux et équipement connexe"

"ABYC E-11: AC et DC des systèmes électriques à bord de bateaux"

** Jauge de conducteur et disjoncteur Table de dimensionnement Longueur totale de chef d'orchestre "

Moteur poussée	Max Ampère	Disjoncteur	Fil Longueur d'extension				
			1.5 mètres	3 mètres	4.5 mètres	6 mètres	7.5 mètres
30#	30	50 Amp @ 12 VDC	5 mm	5 mm	8 mm	13 mm	21 mm
40#, 45#	42		5 mm	8 mm	13 mm	21 mm	21 mm
50#, 55#	50	60 Amp @ 12 VDC	8 mm	13 mm	21 mm	21 mm	33 mm
70#	42	50 Amp @ 24 VDC	5 mm	5 mm	8 mm	8 mm	13 mm
80#	56	60 Amp @ 24 VDC	8 mm	8 mm	8 mm	13 mm	13 mm
101#	46	50 Amp @ 36 VDC	8 mm	8 mm	8 mm	8 mm	8 mm
112#	52	60 Amp @ 36 VDC	8 mm	8 mm	8 mm	8 mm	8 mm
E-Drive	40	50 Amp @ 48 VDC	5 mm	5 mm	5 mm	5 mm	5 mm

**** Le disjoncteur tableau ci-dessus de dimensionnement et chef d'orchestre est uniquement valable" pour les hypothèses suivantes."**

"1. Pas plus de 3 conducteurs sont regroupés à l'intérieur d'une gaine ou conduites à l'extérieur des espaces de moteur."

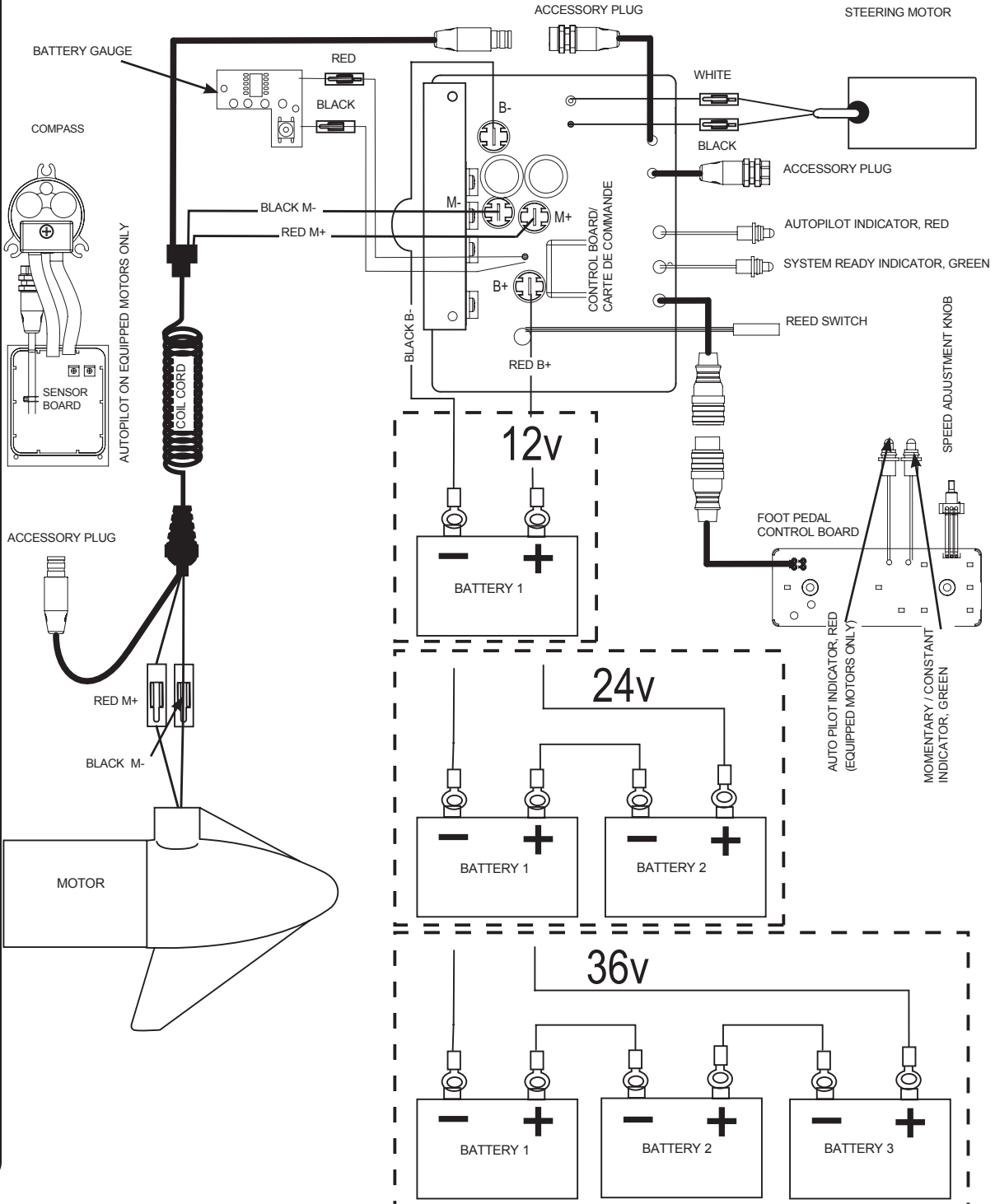
"2. Chaque conducteur a 105oc temp, évalué à isolation."

"3. Pas plus d'une chute de tension de 5 % a permis à la puissance du moteur complet en fonction des besoins de puissance produit publié."

THIS IS A UNIVERSAL MULTI-VOLTAGE DIAGRAM. DOUBLE CHECK YOUR MOTORS VOLTAGE FOR PROPER CONNECTIONS

Over-Current Protection Devices not shown in illustrations.

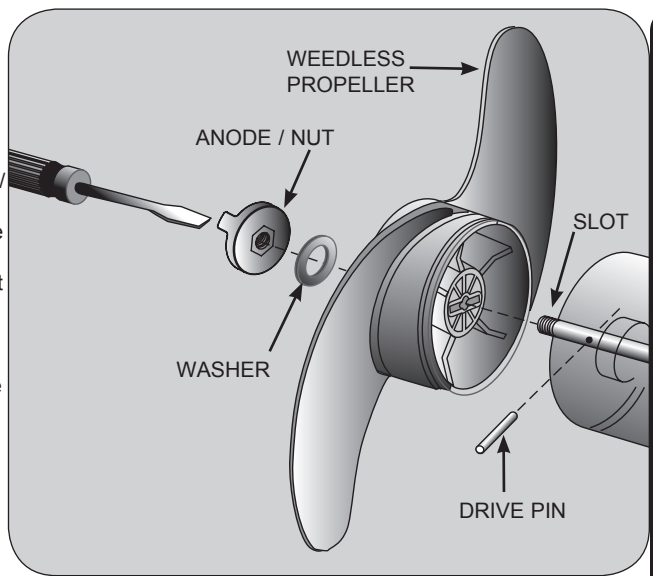
WIRING DIAGRAM



PROPELLER REPLACEMENT:

- Disconnect motor from battery prior to changing the propeller.
- Hold the propeller and loosen the prop nut with a pliers or a wrench.
- Remove prop nut and washer. If the drive pin is sheared/broken, you will need to hold the shaft steady with a screwdriver blade pressed into the slot on the end of the shaft.
- Turn the old prop to horizontal (as illustrated) and pull it straight off. If drive pin falls out, push it back in.
- Align new propeller with drive pin.
- Install prop washer and prop nut.
- Tighten prop nut 1/4 turn past snug. [25-35 inch lbs.] Be careful, over tightening can damage prop.

CAUTION: DISCONNECT THE MOTOR FROM THE BATTERY BEFORE BEGINNING ANY PROP WORK OR MAINTENANCE.



MOTOR MAINTENANCE:

1. After use in salt or brackish water these units should be rinsed with fresh water, then wiped down with a cloth dampened with an aqueous based silicone spray such as Armor All®.
2. The propeller must be cleaned of weeds and fishing line. The line can get behind the prop, wear away the seals and allow water to enter the motor. Disconnect battery and check this after every 20 hours of operation.
3. To prevent accidental damage during trailering or storage, disconnect the battery whenever the motor is off of the water. For prolonged storage, lightly coat all metal parts with silicone spray.
4. For maximum performance, restore battery to full charge before each use. Unless you are using a power panel or MINNKOTA battery charger, disconnect the trolling motor when charging the battery.
5. The composite shaft requires periodic cleaning and lubrication for proper retraction and deployment. A coating of Armor All® will provide "like new" operation.
6. The weedless wedge propeller is designed to provide absolute weed free operation with very high efficiency. To maintain top performance, the leading edge of the blades must be kept smooth. If this edge is rough or nicked, restore to smooth by sanding with fine sandpaper.

NOTICE: DO NOT APPLY LUBRICANT OR ANY TYPE OF GREASE TO TROLLING MOTOR CONNECTORS

MOTOR TROUBLESHOOTING:

1. **Motor fails to run or lacks power:**
 - Check battery connections for proper polarity.
 - Make sure terminals are clean and corrosion free.
 - Check battery water level. Add water if needed.
2. **Motor loses power after a short running time:**
 - Check battery/batteries charge, if low, restore to full charge.
3. **Motor is hard to steer.**
 - Make sure the drive/depth collar is tight and fully engaged with the drive motor.
 - Lubricate the composite shaft.
4. **Motor does not respond to foot pedal commands.**
 - Make sure the cable connector plugs at the drive mount are secure.
5. **Control head vibrates during normal operation:**
 - Remove and rotate the prop 180°. See removal instructions in prop section.

NOTE: For all other malfunctions, see enclosed authorized service center listing for nearest service center.

SYSTEM FEATURES

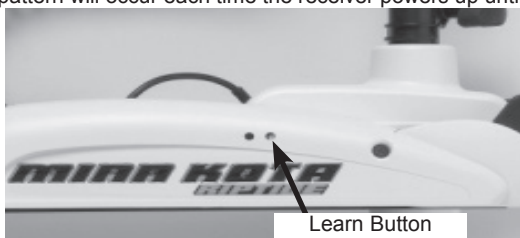
CoPilot for Riptide ST setup and use instructions

- Your motor is factory installed with CoPilot for Riptide ST.
- Wireless control for Riptide ST.
- Plug – n – play design allows for easy hook-up.
- Functions include steering (right/left), prop (on/off), AutoPilot (on/off), high speed bypass, and speed control.
- Receiver mounts into the right side plate of the Riptide ST motor for seamless installation.
- Remote allows motor to be controlled from anywhere in the boat.
- Copilot Riptide ST can be used with or without the corded foot pedal.
- Remote will not interfere with Autopilot or Universal Sonar Operation.
- Up to 10 remotes can be used interchangeably with the same receiver.
- Components are environmentally sealed to protect against rain, wind, or snow.

ADDING / REMOVING REMOTES

THE COPILOT RECEIVER IN THIS KIT HAS ALREADY “LEARNED” THE ID NUMBER OF THE REMOTE IT IS PACKAGED WITH. THE RECEIVER MUST “LEARN” THE ID NUMBER OF ANY ADDITIONAL REMOTE(S) THAT YOU INTEND TO USE. WHEN THE RECEIVER LEARNS THE ID NUMBER OF A REMOTE, THAT ID NUMBER IS RETAINED IN THE RECEIVER EVEN WHEN THE MOTOR IS DISCONNECTED FROM ITS POWER SOURCE.

- To “learn” the ID number of additional remotes, follow these steps:
 - 1.) The system ready light must be on. To do so; push in the release handle and rotate it down.
 - 2.) Press and hold the **LEARN** button located on the side of the receiver (receiver will emit a continuous tone.) A small blunt object must be used to depress the **LEARN** button (pen or screwdriver.)
 - 3.) Press any button on the remote (receiver will beep 4 times confirming that it has “learned” the ID number of the remote and that the programming is valid and complete.)
- “Re-learning” the ID number of the same remote will not overwrite previously “learned” remotes.
- If the receiver has “learned” the ID number of ten remotes, “learning” an eleventh remote will erase or over write the first “learned” remote.
- The CoPilot allows the angler to erase all stored remote ID numbers from the receiver. To do so, follow these steps:
 - 1.) Remove power from the receiver by stowing the motor.
 - 2.) Press and hold the **LEARN** button and power up the receiver by pushing in the release handle and rotate it down. Hold the **LEARN** button down for 10 seconds. During this time the receiver audio will emit a warble sound, slowly transition to a constant beep and then shut off.
 - 3.) Release the Learn button and the receiver will reboot. The receiver will emit a 2 second long beep indicating memory is empty. This audio pattern will occur each time the receiver powers up until a remote ID number is learned.



Learn Button

MISCELLANEOUS INFORMATION

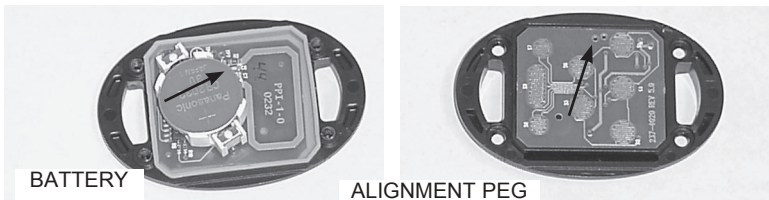
- The seven buttons are for **PROP ON/OFF, STEER LEFT, STEER RIGHT, AUTOPILOT ON/OFF, HIGH SPEED BYPASS, INCREASE SPEED, AND DECREASE SPEED.**
- Pressing the **PROP ON/OFF** button will turn the propeller on or off. The button does not need to be held down. (Press the button once to turn the motor ON; press button a second time to turn it OFF.)
- Pressing either **STEERING** button will cause the motor to turn in the desired direction as long as the button is held down. If a steering button is held for more than seven seconds, the steering will automatically stop.
- Pressing the **AUTOPILOT ON/OFF** button will turn the autopilot on or off. The button does not need to be held down. If the motor does not have AutoPilot, the **AUTOPILOT ON/OFF** button will be non-functional.
- Pressing the **HIGH SPEED BYPASS** button toggles the speed between the current setting and the maximum setting (level 10). (Pressing the button sets the motor at speed 10 instantly; pressing the button again sets the motor speed back to the previous speed setting.)
- Pressing and releasing the **INCREASE SPEED** or **DECREASE SPEED** buttons will cause the speed to increase or decrease by one level. The speed is adjustable from level 0-10. At level 0, the prop *will not* turn.
- An audible beep is heard for each step change in speed. Attempting to go higher than speed 10 or lower than speed 0 will result in the speed not changing and no beep will be heard. See the Audio Mode section for more information.
- If the receiver senses no foot pedal or remote operation for 1 hour, the remote speed setting is automatically set to zero. This could help prevent unintentional activation of the propeller if the prop on /off remote button is inadvertently pressed or bumped while in storage.

BATTERY REPLACEMENT

THE REPLACEMENT BATTERY MUST BE A MODEL CR2032 COIN CELL TYPE. IT IS STRONGLY RECOMMENDED THAT A NAME BRAND BATTERY IS USED.

To replace the battery, follow these steps:

- 1.) Temporarily ground yourself by touching a grounded metal object in order to discharge any static electricity in your body.
- 2.) Remove the four screws on the bottom of the remote case.
- 3.) Separate the case halves to access the circuit board.
- 4.) Pull back the retaining fingers of the battery holder to remove the battery (underside of circuit board.)
- 5.) Install the new battery with the positive (+) side of the battery facing up (away from the circuit board). **Ensure battery is snapped securely in place.**
- 6.) Reassemble the remote. Note that the alignment peg in the remote case must line up with the corresponding alignment hole in the circuit board. Also note that the keypad must be positioned so that the buttons are over the end of the circuit board opposite from the alignment peg and hole. Reinstall the four case screws and tighten them as required.



GENERAL OPERATION

Using the CoPilot with the corded foot pedal

- The CoPilot Riptide ST and corded foot pedal can be used for motor control simultaneously.
- The corded foot pedal and CoPilot remote operate on a first in line priority basis. If a button is pressed and held down on the foot pedal and a button with the same function is then pressed on the remote, the foot pedal will have priority. The remote would have priority if the remote was first to send the command.

- Multiple functions can be done at the same time. For instance AutoPilot can be turned on or off at the same time speed is being adjusted on the foot pedal. If the momentary button is being held down on the corded foot pedal, steering adjustments can be made at the same time from the remote.
- When the momentary button is being held down on the corded foot pedal, speed increase/decrease and prop on/off will not function on the remote.
- When the foot pedal has priority over the remote and remote commands are received, the receiver will emit an audible chirp. This will indicate that the remote is functioning properly however the foot pedal is taking priority.

Using the CoPilot without the corded foot pedal

- Some anglers will prefer to have the deck completely clear of any unnecessary cables and foot pedals. When using the Copilot in this manner, the receiver will always react to any commands from the remote.

AUDIO MODES

- There are three receiver audio modes available. To switch from one audio mode to another, press and hold both the **INCREASE** and **DECREASE** speed buttons on the remote down for one second. The receiver will respond with 1, 2 or 3 audible beeps indicating the corresponding receiver audio mode change.

Audio Mode 1 = All of the normal audible sounds mentioned in this owners manual.

Audio Mode 2 = Same as audio mode 1 plus an audible beep for speed increase / decrease and prop on/off.

UNIT IS FACTORY PRE-SET TO AUDIO MODE 2.

Audio Mode 3 = Same as audio mode 2 plus the prop on audible click every few seconds.

NOTE : WHEN THE CORDED FOOT PEDAL IS IN CONTROL AND THE PROPELLER IS ON, THE PROP ON INDICATOR CLICK WILL BE HEARD IF THE RECEIVER IS SET TO AUDIO MODE 3.

COPILOT TROUBLESHOOTING

AUDIO PATTERN	WHAT CONDITION CAUSES IT	OCCURS IN WHICH AUDIO MODE
1 beep	Pressing the INCREASE SPEED or DECREASE SPEED button.	Modes 2 and 3
1 beep	Pressing the PROP ON/OFF button to turn the prop on.	Modes 2 and 3
2 beeps	Pressing the PROP ON/OFF button to turn the prop off.	Mode 2 and 3
Single tick every 1.5 sec.	When the prop is active including when speed is set to 0.	Mode 3
1 beep	Switching to Audio Mode 1 (pressing the INCREASE SPEED and DECREASE SPEED buttons simultaneously for 1 second.)	All
2 beeps	Switching to Audio Mode 2 (pressing the INCREASE SPEED and DECREASE SPEED buttons simultaneously for 1 second.)	All
3 beeps	Switching to Audio Mode 3 (pressing the INCREASE SPEED and DECREASE SPEED buttons simultaneously for 1 second.)	All
1 chirp	Every time the receiver is powered up and there is at least one remote ID learned.	All

AUDIO PATTERN	WHAT CONDITION CAUSES IT	OCCURS IN WHICH AUDIO MODE
2 second long beep	Every time the receiver is powered up an there are no remote IDs learned.	All
5 beeps	Foot pedal speed control is moved after speed has been adjusted with remote	All
Steady tone	Heard while holding down the learn button on the receiver.	All
4 beeps	After a remote button is pressed while the receiver learns it's ID.	All
A ten second long warbling sound that transitions into a steady tone	Heard during the process used to clear all stored remote IDs. After the learn switch is released, a 2 second long beep will be heard.	All

TECHNICAL ASSISTANCE

CAUSE	EFFECT	SOLUTION
REMOTE IS NOT TRANSMITTING	The battery is discharged	Replace battery
	Receiver may not have "learned" the ID number of the remote.	Remote needs to be learned. See "ADDING/REMOVING REMOTES" section to learn the remote ID number.
	If remote has been taken apart, the keypad and top case may have been installed backwards.	Take remote apart (BATTERY REPLACEMENT SECTION) and reinstall case halves with the proper orientation.
THE PROP IS NOT TURNING BUT THE "PROP ON" AUDIO TICK IS STILL GOING	Prop speed is set at "0"	Increase the prop speed above "0"
	Prop ON tick occurs only in Audio mode 3	Switch Audio mode to either Audio 1 or 2. See "Audio Modes" section.

Do not take your CoPilot receiver or remote to your dealer or to a Minn Kota Authorized Service Center for repair or replacement. The CoPilot remote has no field replaceable or user serviceable parts, (other than battery replacement). For service/technical assistance call 1-800-227-6433, or send the CoPilot receiver and remote(s) along with proof of purchase date to: Johnson Outdoors- MinnKota Service, 121 Power Drive, Mankato MN 56002-8129

FREQUENTLY ASKED QUESTIONS

Q. Are there any on/off switches?

A. No. The receiver is always powered up whenever the motor is deployed and connected to the battery or batteries. The remote automatically goes into a low power “sleep mode” whenever there are no buttons being pressed.

Q. Does the remote float?

A. The remote will float by itself.

Q. Can other CoPilot users control my CoPilot if they get too close?

A. No. Each remote has its own unique ID number, your CoPilot receiver will not respond to commands from other “unlearned” remotes.

Q. How many remote ID numbers can my receiver “learn”?

A. 10

Q. What happens if my receiver has 10 different remote ID numbers “learned” and I attempt to “teach” it another one ?

A. The first remote ID number that was learned will be erased (first in, first out).

Q. How long should the battery in the remote last?

A. Under normal use and conditions, the battery should last for at least two regular fishing seasons.

Q. Where can I purchase additional remotes?

A. Through any regular Minn Kota retail outlet.

FCC DISCLAIMER**Compliance Statement (Part 15.19)**

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning (Part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Industry Canada Statement

The term “IC” before the certification/registration number only signifies that the Industry Canada technical specifications were met.

LIMITED LIFETIME WARRANTY ON COMPOSITE SHAFT, LIMITED TWO-YEAR WARRANTY ON ENTIRE PRODUCT:

Composite Shaft

Johnson Outdoors Marine Electronics, Inc. warrants to the original purchaser that the composite shaft of the purchaser's Minn Kota® trolling motor is free from defects in materials and workmanship appearing within the original purchaser's lifetime. Johnson Outdoors Marine Electronics, Inc. will provide a new shaft, free of charge, to replace any composite shaft found to be defective more than two (2) years after the date of purchase. Providing such a new shaft shall be the sole and exclusive liability of Johnson Outdoors Marine Electronics, Inc. and the sole and exclusive remedy of the purchaser for breach of this warranty; and purchaser shall be responsible for installing, or for the cost of labor to install, any new composite shaft provided by Johnson Outdoors Marine Electronics, Inc.

Entire Product

Johnson Outdoors Marine Electronics, Inc. warrants to the original purchaser that the purchaser's entire Minn Kota® trolling motor is free from defects in materials and workmanship appearing within two (2) years after the date of purchase. Johnson Outdoors Marine Electronics, Inc. will, at its option, either repair or replace, free of charge, any parts, including any composite shaft, found to be defective during the term of this warranty. Such repair or replacement shall be the sole and exclusive liability of Johnson Outdoors Marine Electronics, Inc. and the sole and exclusive remedy of the purchaser for breach of this warranty.

Terms Applicable to Both Warranties

These limited warranties do not apply to motors used commercially nor do they cover normal wear and tear, blemishes that do not affect the operation of the motor, or damage caused by accidents, abuse, alteration, modification, misuse or improper care or maintenance. DAMAGE TO MOTORS CAUSED BY THE USE OF REPLACEMENT PROPELLERS OR OTHER REPLACEMENT PARTS NOT MEETING THE DESIGN SPECIFICATIONS OF THE ORIGINAL PROPELLER AND PARTS WILL NOT BE COVERED BY THIS LIMITED WARRANTY. The cost of normal maintenance or replacement parts which are not defective are the responsibility of the purchaser.

"WARNING: This product contains chemical(s) known to the state of California to cause cancer and/or reproductive toxicity."

To obtain warranty service in the U.S., the motor or part believed to be defective, and proof of original purchase (including the date of purchase), must be presented to a Minn Kota® Authorized Service Center or to Minn Kota's factory service center in Mankato, MN. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota® Authorized Service Center or factory, labor to haul out, remove, re-install or re-rig products removed for warranty service, or any other similar items are the sole and exclusive responsibility of the purchaser. Motors purchased outside of the U.S. must be returned pre-paid with proof of purchase (including the date of purchase and serial number) to any Authorized Minn Kota® Service Center in the country of purchase. Warranty service can be arranged by contacting a Minn Kota® Authorized Service Center listed on the enclosed sheet, or by contacting the factory at 1-800-227-6433 or fax 1-800-527-4464.

Note: Do not return your Minn Kota® motor to your retailer. Your retailer is not authorized to repair or replace them.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LIMITED WARRANTIES. IN NO EVENT SHALL ANY IMPLIED WARRANTIES (EXCEPT ON THE COMPOSITE SHAFT), INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, EXTEND BEYOND TWO YEARS FROM THE DATE OF PURCHASE. IN NO EVENT SHALL JOHNSON OUTDOORS MARINE ELECTRONICS, INC. BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

ENVIRONMENTAL COMPLIANCE STATEMENT:

It is the intention of Johnson Outdoors Marine Electronics, Inc. to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

WEEE Directive:

EU Directive 2002/96/EC "Waste of Electrical and Electronic Equipment Directive (WEEE)" impacts most distributors, sellers, and manufacturers of consumer electronics in the European Union. The WEEE Directive requires the producer of consumer electronics to take responsibility for the management of waste from their products to achieve environmentally responsible disposal during the product life cycle.

WEEE compliance may not be required in your location for electrical & electronic equipment (EEE), nor may it be required for EEE designed and intended as fixed or temporary installation in transportation vehicles such as automobiles, aircraft, and boats. In some European Union member states, these vehicles are considered outside of the scope of the Directive, and EEE for those applications can be considered excluded from the WEEE Directive requirement.

This symbol (WEEE wheelee bin) on product indicates the product must not be disposed of with other household refuse. It must be disposed of and collected for recycling and recovery of waste EEE. Johnson Outdoors Marine Electronics, Inc. will mark all EEE products in accordance with the WEEE Directive. It is our goal to comply in the collection, treatment, recovery, and environmentally sound disposal of those products; however, these requirement do vary within European Union member states. For more information about where you should dispose of your waste equipment for recycling and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased.



Disposal:

Minn Kota motors are not subject to the disposal regulations EAG-VO (electric devices directive) that implements the WEEE directive. Nevertheless never dispose of your Minn Kota motor in a garbage bin but at the proper place of collection of your local town council.

Never dispose of battery in a garbage bin. Comply with the disposal directions of the manufacturer or his representative and dispose of them at the proper place of collection of your local town council.

REPAIR AND TROUBLESHOOTING

We offer several options to help you troubleshoot and/or repair your product. Please read through the options listed below.



FREQUENTLY ASKED QUESTIONS

Did you know that we have over 100 FAQ's to help answer all of your Minn Kota questions? Visit www.minnkotamotors.com and click on "Frequently Asked Questions" under the "Service" tab to find an answer to your question.

<http://www.minnkotamotors.com/service/faq.aspx?linkidentifier=id&itemid=817>



AUTHORIZED SERVICE CENTERS

Minn Kota has over 300 authorized service centers in the United States and Canada where you can purchase parts or get your products repaired. Please visit www.minnkotamotors.com and click on "Service Center Locator" under the "Service" tab to locate a service center in your area.

<http://www.minnkotamotors.com/service/aslocator.aspx>



CALL US (FOR U.S. AND CANADA)

Our customer service representatives are available Monday – Friday between 7:00am – 4:30pm CST at 800-227-6433. If you are calling to order parts, please have the 11-character serial number from your product, specific part numbers, and credit card information available. This will help expedite your call and allow us to provide you with the best customer service possible. You can reference the parts list located in your manual to identify the specific part numbers.

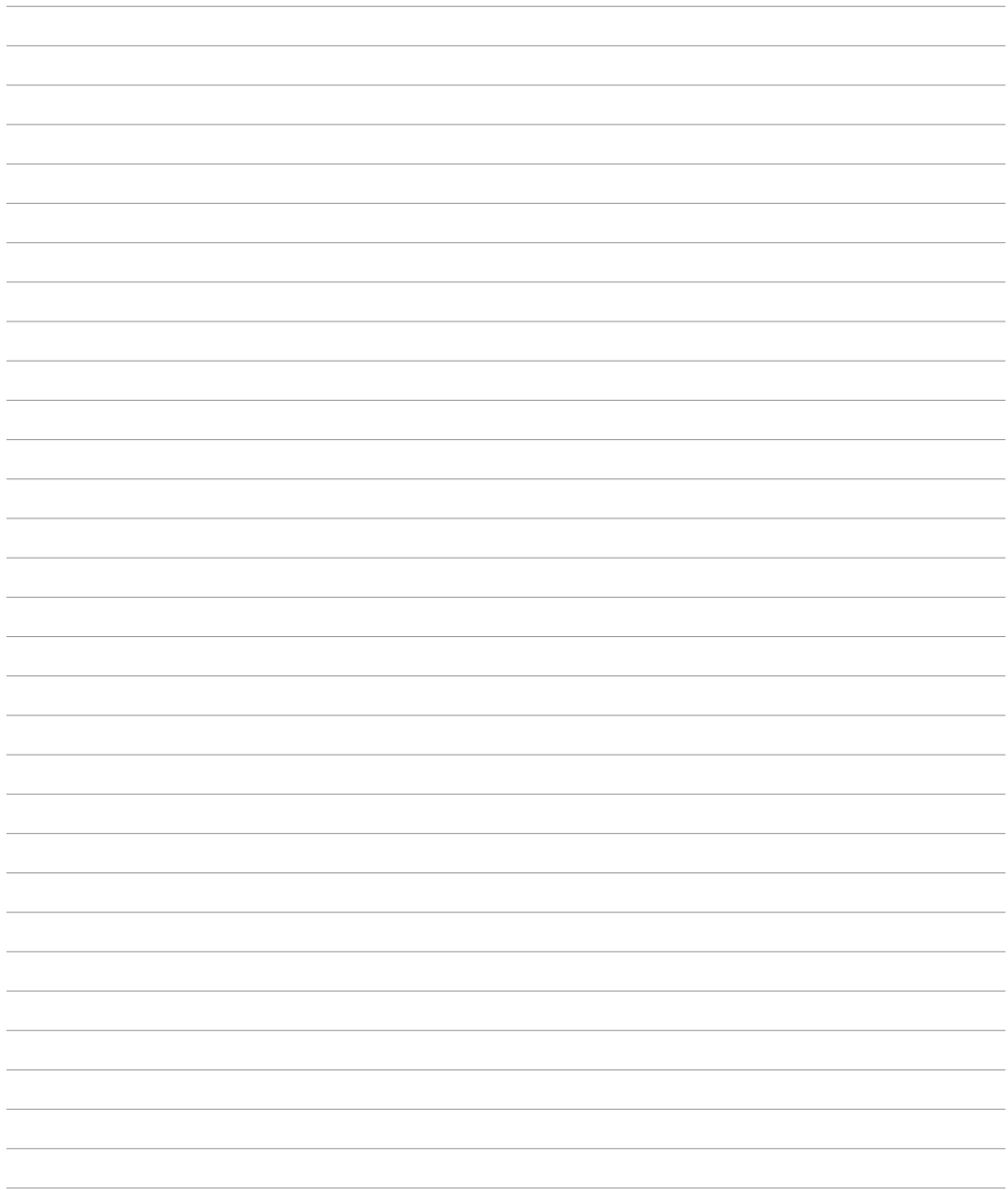


EMAIL US

You can email our customer service department with questions regarding your Minn Kota products. To email your question, visit www.minnkotamotors.com and click on "Contact Us" under the "Service" tab.

<http://www.minnkotamotors.com/service/contact.aspx>

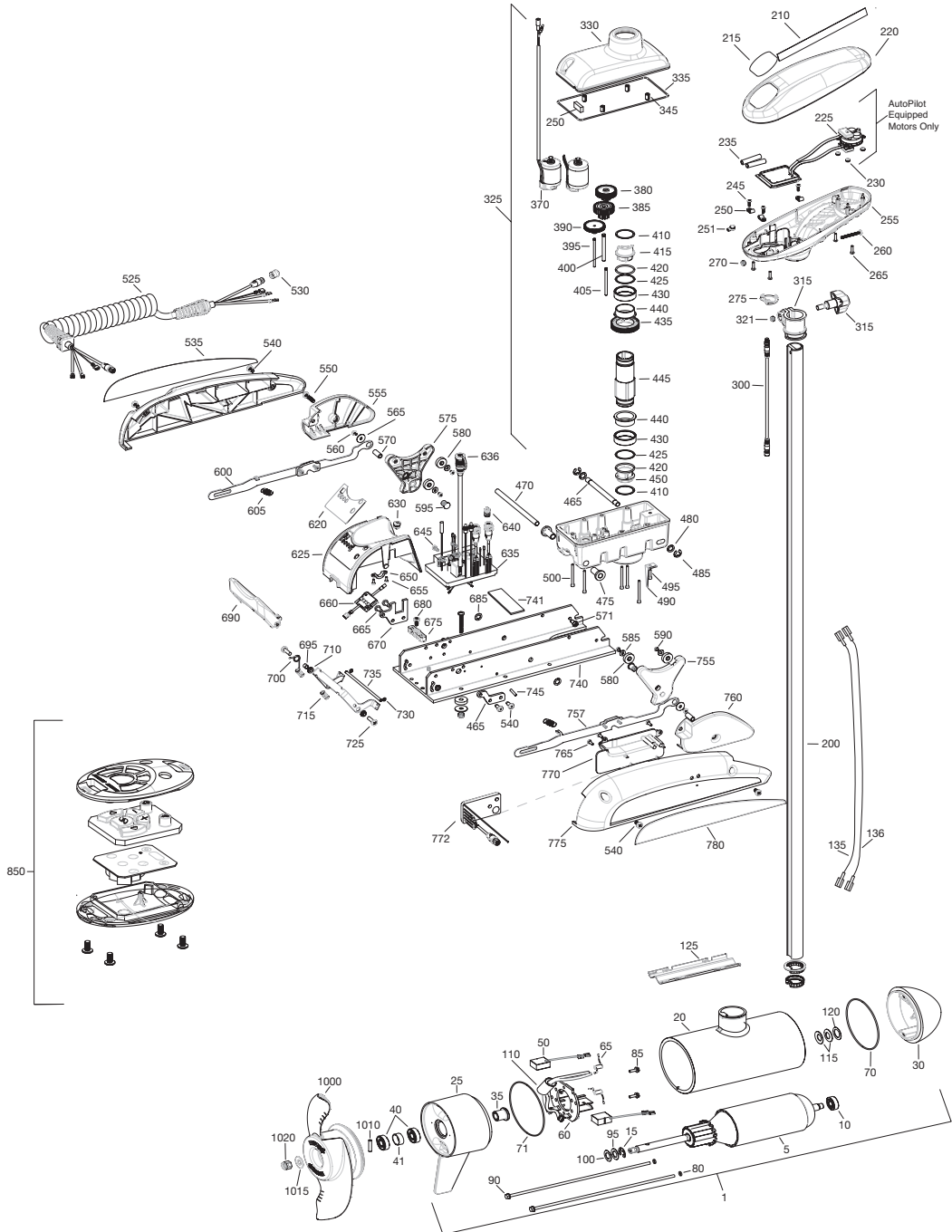




RT112/ST
112 LBS THRUST
36 VOLT / 52 AMPS
60" SHAFT

This page provides MinnKota® WEEE compliance disassembly instructions. For more information about where you should dispose of your waste equipment for recycling and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased.

Tools required: Flat head screw driver, Phillips screw driver, Socket set, Pliers, Wire cutters.



In the U.S.A., replacement parts may be ordered directly from MINN KOTA Parts Dept., 121 Power Drive, P.O. Box 8129 Mankato, Minnesota 56002-8129. In Canada, parts may be ordered from any of the Canadian Authorized Service Centers shown on the enclosed list. Be sure to provide the MODEL and SERIAL numbers of your motor when ordering parts. Please use the correct part numbers from the parts list. Payment for any parts ordered from the MINN KOTA parts department, may be by cash, personal check, Discover Card, MasterCard or VISA. To order, call 1-800-227-6433 or FAX 1-800-527-4464.

Item	P/N	Description	Qty	Item	P/N	Description	Qty
1	2777091	36V Motor 60" SW w/tube	1	350	2308601	Breather, filter	1
5	2-100-245	Armature assembly	1	360	2302240	Pinion gear	1
10	140-014	Bearing	1	365	2300265	Cap, motor, plastic	1
15	788-040	Retaining ring	1	■	2777024	Dual steering motor assembly, 36V	1
20		Center hsg. w/tube [included in #200]		370	2777025	Motor, steering, 36V	1
25	2-300-151	Brush end housing assembly	1	380	2302255	Gear, cluster 3rd stage	1
30	421-241	Plain end housing assembly SW	1	385	2302250	Gear, cluster 2nd stage	1
35	144-017	Flange bearing	1	390	2302245	Gear, cluster 1st stage	1
40	880-025	Seal	2	395	2302610	Shaft, gear 1st stage	1
41	725-095	Paper tube - seal bore	1	400	2302620	Shaft, gear 3rd stage	1
50	188-095	Brush	2	405	2302615	Shaft, gear 2nd stage	1
60	9-738-011	Brush plate assembly	1	410	2321704	Washer, thrust	2
65	975-045	Brush spring	2	415	2321515	Liner, output tube	2
■	2881450	Seal & Oring Kit [includes 40, 70-80]		420	2324608	O-ring, 224	2
70	701-098	O-ring, plain end	1	425	2321720	Shim, O-ring	2
71	701-046	O-ring, brush end	1	430	2327315	Bushing, Aluminum Spacer	2
80	701-009	O-ring, thru-bolt	2	435	2322200	Gear, output	1
85	2053410	Screw, 10-32 x 1/2"	2	440	2327314	Bushing, Pro Steering SW	2
90	830-094	Thru-bolt 12-24	2	445	2322031	Tube, output machined	1
95	990-051	Washer, steel	2	450	2321510	Collar, drive, bottom	1
100	990-052	Washer, nylontron	2	455	2326507	Steering housing, Bottom	1
110	2777312	Ferrite bead w/shrink	1	460	2320605	Leadwire, Steering	1
115	992-011	Washer, belleville	2	465	2322601	Pin, latch, SS	1
120	990-011	Washer, shim	1	470	2322603	Pin, pivot, SS	1
125	582-016	Clip, retaining, sonar	1	475	2327310	Bushing, pivot pin	2
135	640-044	Leadwire, black 60"	1	480	2321702	Washer, flat .375	2
136	640-144	Leadwire, red 60"	1	485	2263011	E-ring .375	2
				490	2322702	Spring, latch pin	2
200	2777345	Tube, comp. 60" SW [includes 20]	1	495	2323410	Screw, 8-32 x .75	1
				500	2323408	Screw, 8-32 x 2	7
210	2325666	Decal, cover	2				
215	2325690	Decal, ctrl box cover, RT Autopilot	1	510	2090651	Leawire, 10 ga	1
220	2320201	Cover, ctrl box	1	515	2305403	Shrink tube, .5 ID x 1.0 Adhesive	4
225	2324032	Ctrl board, compass, Autopilot only	1	520	2305410	Shrink tube, .315 OD x 2.25"	3
230	2302960	Grommet, compass, Autopilot only	3	521	2305415	Shrink tube, .472 OD x 2.25"	1
235	2305415	Wire insulator	2	525	2991271	Coil cord, 60"	1
245	2372100	Screw, 8-18 x .625	3	530	2320202	Cap, dust, coil cord, non-AP only	1
250	2052510	Cable clamp	3	535	2325643	Decal, sideplate, left	1
255	2322501	Control box	1	540	2323405	Screw, 1/4-20	4
260	2332102	Screw, 10-24	1	545	2321916	Sideplate, left	1
265	2372100	Screw, 8-18 x .625	4	550	2323403	Screw, 1/4-20 x .375 SS	2
270	2333101	Nut, 10-24	1	555	2321927	Skid, left	1
275	2224702	Plug, ctrl box	1	560	2323422	Screw, 10-24 x .375	2
305	2771500	Depth collar assembly	1	565	2321700	Washer, #10 SS	2
315	2260906	Knob [included in #305]	1	570	2322921	Stand-off, aluminum anodized	2
320	2321706	Washer [included in #305]	1	571	2323405	Screw 1/4-20 x 1/2" MCH SS	2
321	2323102	Nut [included in #305]	1	575	2323907	Ramp, 4.5" left	1
				580	2325117	Pad, rubber rest	4
325	2997028	Steering hsg. asy. [includes 330-500]	1	585	2321706	Washer, #8	4
330	2326502	Steering housing top	1	590	2323412	Screw, 8-18 x .25	4
335	2324604	O-ring, case seal	1	595	2324706	Insert, ramp	2
345	2302605	Roll pin 5/16	4	600	2994203	Arm, release, left	1

* This item is part of an assembly. This item cannot be sold separately due to machining and /or assembly that is required.

Item	P/N	Description	Qty	Item	P/N	Description	Qty
605	2322710	Spring, extension	2	1015	2091701	Washer, prop, large	1
■	2770251	Cover, speed control with decal	1	1020	2198401	Nut, Anode, nylock, prop, large	1
620	2325651	Decal, speed control	1				
625	2320211	Cover, speed control	1	■	2994864	Mounting hardware bag assy	
630	2322901	Strain relief	1				
■	2884050	Switch-reed repair kit					
635	2324017	Control board, 24-36v	1				
636	2320208	Dust plug	1				
640	2320203	Cap, dust, control board	1				
645	2323406	Screw, 10-24 x	2				
650	2321315	Holder, connector	1				
655	2332103	Screw, 6-20 x .375	2				
660	2074082	Battery meter, 36v	1				
665	2323402	Screw, 1/4-20 x .375	4				
670	2321941	Bracket, strain relief	1				
675	2321310	Strain relief, wire	1				
680	2323405	Screw, 1/4-20 x .5	1				
685	2333100	Speed nut, .375	2				
690	2320216	Handle, release cover	1				
695	2301700	Bushing,	1				
700	2322701	Spring, release handle	1				
710	2320401	Handle, release SW	1				
715	2322712	Spring, release handle	2				
720	2322604	Bushing, handle	2				
725	2332104	Screw, 1/4-20 x .625	2				
730	2323000	E-clip, 3/16, SS	2				
735	2322607	Pin, follower, handle	1				
740	2321906	Base extrusion, machined	1				
741	2321721	Shim, 2 x 4 x .025"	1				
745	2322912	Spring pin,	2				
750	2321951	Bracket, sideplate	1				
755	2323902	Ramp, 4.5" right	1				
757	2994201	Arm, release, Right	1				
760	2321922	Skid, right	1				
765	2301310	Screw, 8-18 x .5	3				
770	2370221	Cover, access, SW	1				
772	2374097	Copilot Reciever Board	1				
775	2321911	Sideplate, right, SW	1				
780	2325642	Decal, sideplate, right	1				
850	2994095	Remote assembly	1				
851	2372502	Case, cover, transmitter	1				
860	2375112	Keypad, transmitter	1				
865		Transmitter board	1				
870		Battery, transmitter	1				
875	2372505	Case, bottom, transmitter	1				
880	2373440	Screw, 4-24	4				
■	1378160	Propeller kit WW2 [1000-1020]					
■	2994876	Propeller bag assy [1010-1020]					
1000	2341160	Propeller WW2	1				
1010	2262658	Drive pin, large	1				

Minn Kota accessories available for your motor.



OnBoard Chargers



Portable Chargers



Stabilizer Kits



Quick Release Brackets



Circuit Breakers



Anywhere. Anytime.

Visit our website at www.minnkotamotors.com