

COPILOT ACCESSORY

FOR POWERDRIVE

COMPATIBLE WITH POWERDRIVE MOTORS MANUFACTURED 2017 OR
AFTER.

INTRODUCTION

THANK YOU

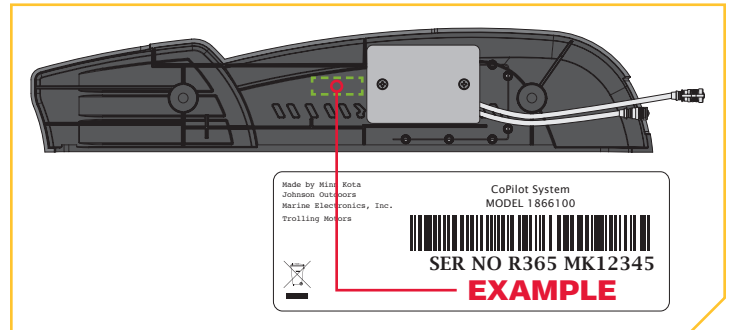
Thank you for choosing Minn Kota. We believe that you should spend more time fishing and less time positioning your boat. That's why we build the smartest, toughest, most intuitive trolling motors on the water. Every aspect of a Minn Kota trolling motor is thought out and rethought until it's good enough to bear our name. Countless hours of research and testing provide you the Minn Kota advantage that can truly take you "Anywhere. Anytime." We don't believe in shortcuts. We are Minn Kota. And we are never done helping you catch more fish.

REGISTRATION

Remember to keep your receipt and immediately register your product. A registration card is included with your product or you can complete registration on our.

SERIAL NUMBER

Your Minn Kota 11-character serial number is very important. It helps to determine the specific model and year of manufacture. When contacting Consumer Service or registering your product, you will need to know your product's serial number. We recommend that you write the serial number down so that you have it available for future reference.



NOTE: The serial number on your CoPilot is located on a label inside your product package. We recommend placing the label on the inside of the Sideplate or storing your serial number label in a secure location.

Model: _____

Serial Number: _____

Purchase Date: _____

Store Where Purchased: _____

Please thoroughly read this user manual. Follow all instructions and heed all safety and cautionary notices. Use of this product is only permitted for persons that have read and understood these user instructions. Minors may use this accessory only under adult supervision.

COMPATIBLE WITH POWERDRIVE MOTORS MANUFACTURED 2017 OR AFTER.

This remote is not compatible with PowerDrive V2 or Legacy PowerDrive motors. Check to see that the model name on your serial number tag includes "BT" to ensure compatibility. Model names that do not end in "BT" are not compatible with this remote. Motors manufactured in 2017 have a serial number that begins with the letter R. Serial Numbers starting with a letter before R in the alphabet were manufactured prior to 2017, and are therefore not compatible.

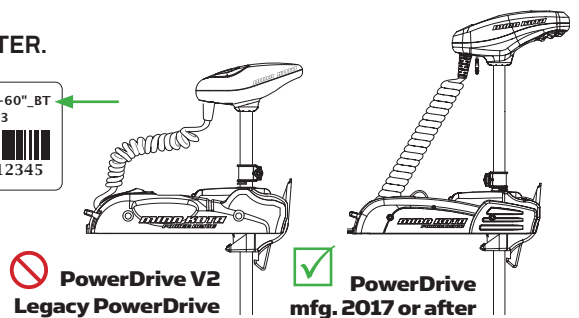
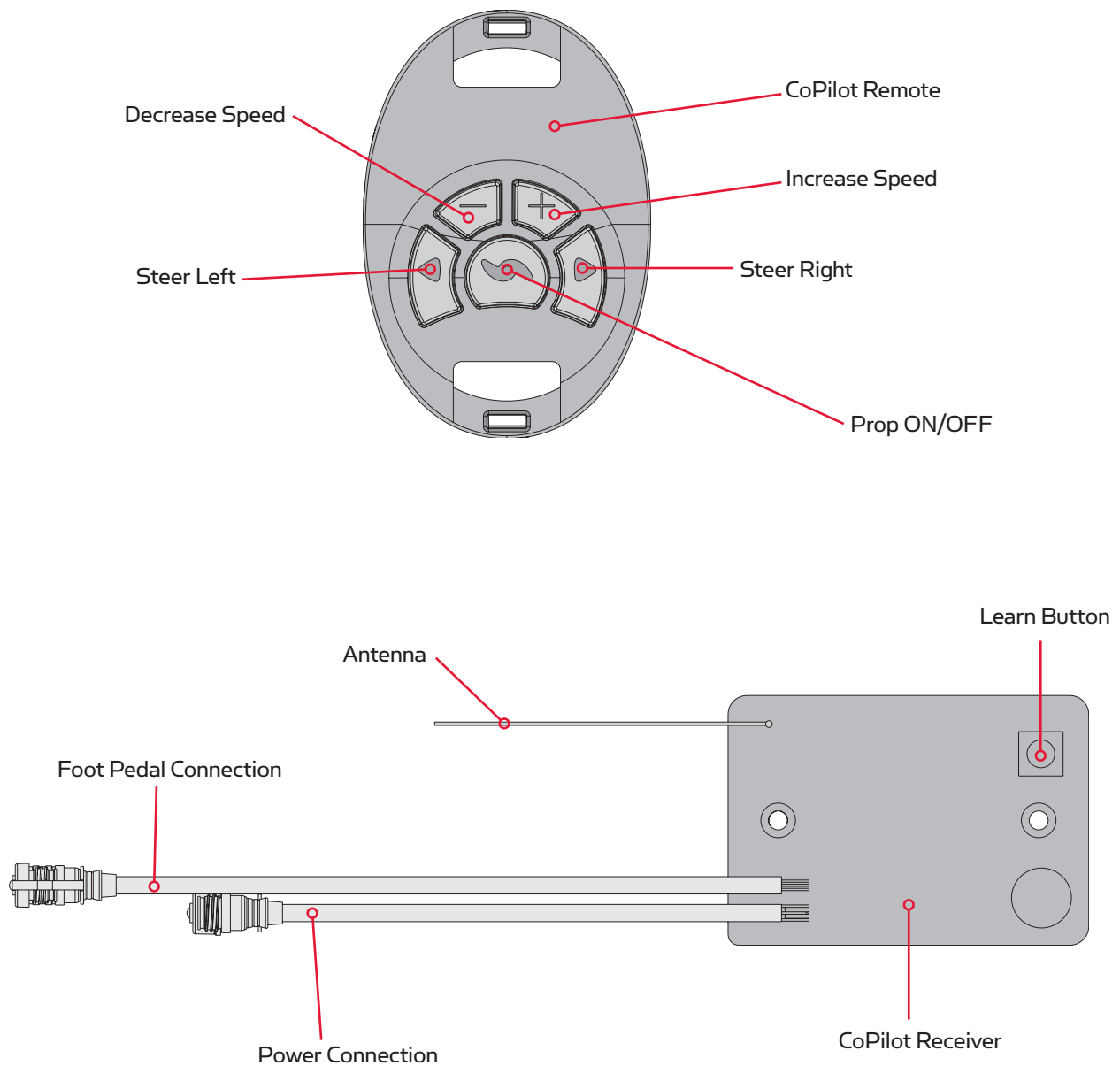


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FEATURES



NOTE: Specifications subject to change without notice. This diagram is for reference only and may differ from your actual motor.

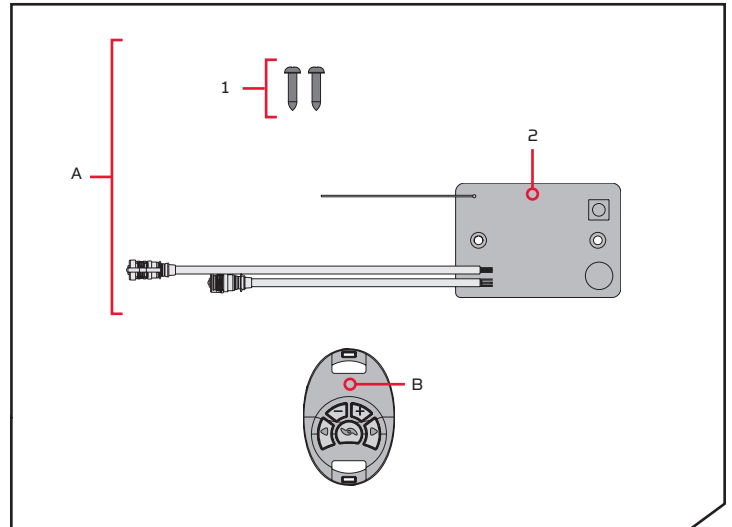
INSTALLATION

INSTALLING THE COPILOT

Your new CoPilot accessory comes with everything you'll need to directly install it on your trolling motor. These instructions are intended to show how to install your CoPilot into the PowerDrive. Please review the parts list, mounting considerations and tools needed for installation prior to getting started.

INSTALLATION PARTS LIST

Item / Assembly	Part #	Description	Qty.
A	2994112	CTRL BOARD V2 COPILOT RECEIVER	1
B	2994020	TRANSMTR, ASY, PD/AP COPLT (SUB)	1
1	2373418	SCREW-#8 X 5/8 PPHSMS S/S	2
2	2374092	CTRL BOARD V2 COPILOT RECEIVER	1
▲	2377166	MANUAL - CO-PILOT POWERDRIVE	1



MOUNTING CONSIDERATIONS

WARNING

We recommend installing your CoPilot while the boat is on your trailer in a stable position. The motor should be secured and disconnected from a power source before beginning installation.

TOOLS AND RESOURCES REQUIRED

- #2 Phillips Screw Driver
- #3 Phillips Screw Driver

✘ This part is included in an assembly and cannot be ordered individually.
▲ Not shown on Parts Diagram.

INSTALLATION

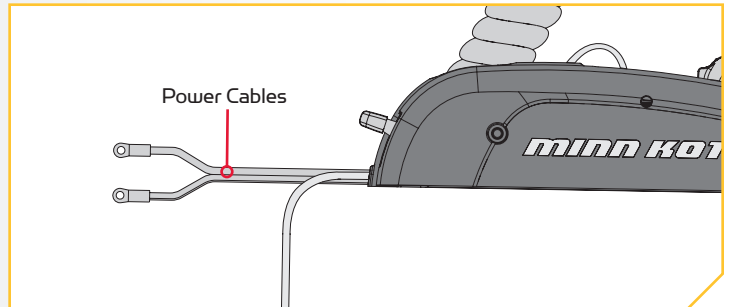
Installing the CoPilot Receiver

- 1 a. Make sure that the Power Cables from the battery are disconnected, or that the breaker, if equipped, is "off".

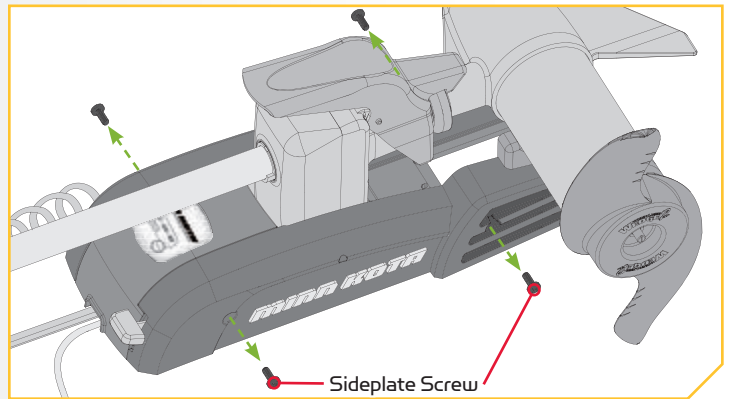


WARNING

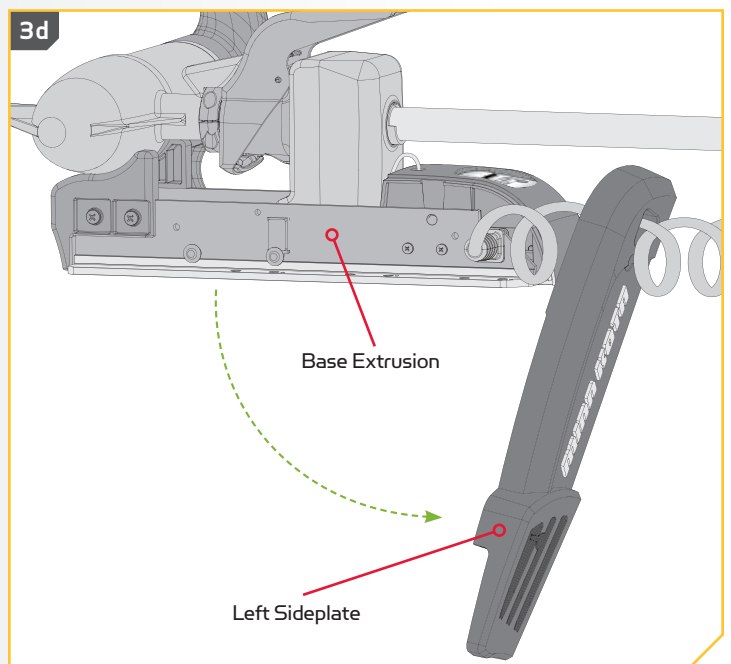
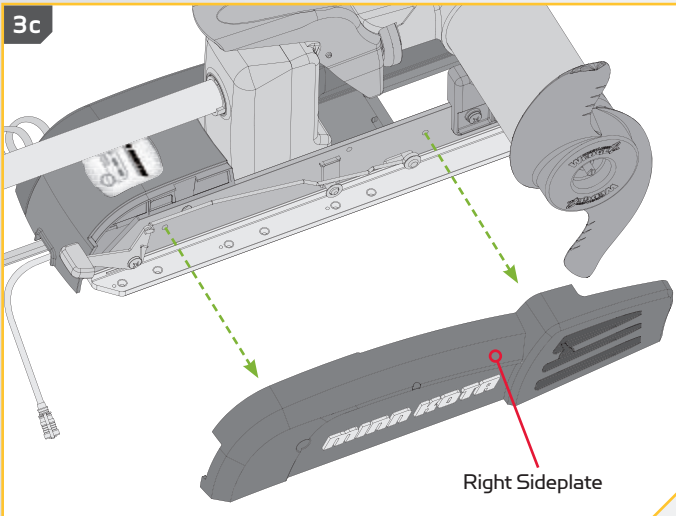
Make sure the motor is mounted on a level surface and is not connected to a power source.



- 2 b. Using a #2 Phillips Screwdriver, remove the four 1/4-20 x 5/8" Screws from the Right Sideplate and Left Sideplate of the PowerDrive mount.



- 3 c. Remove the Right Sideplate.
- d. Swing the Left Sideplate out and away from the Base Extrusion.

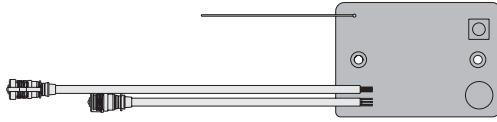


INSTALLATION

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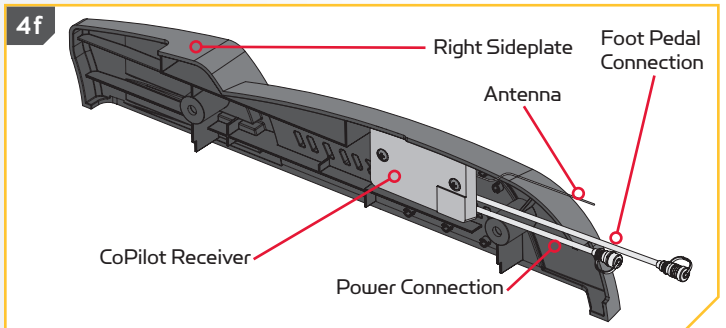
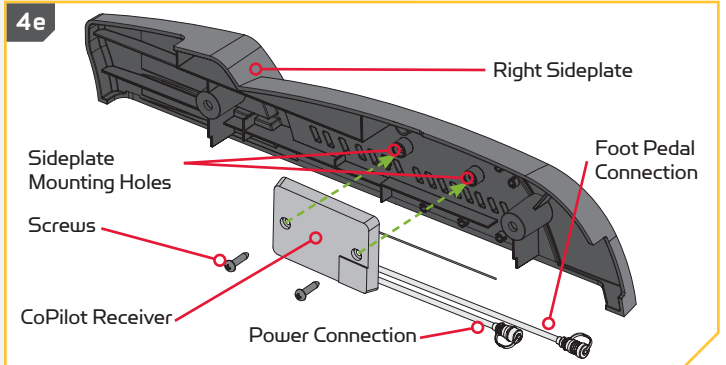
ITEM(S) NEEDED

#1 x 2



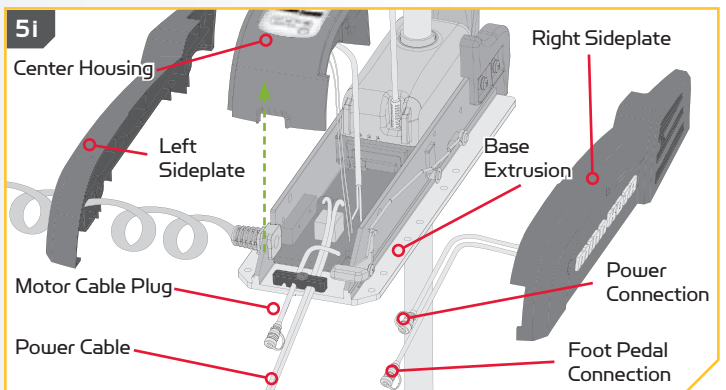
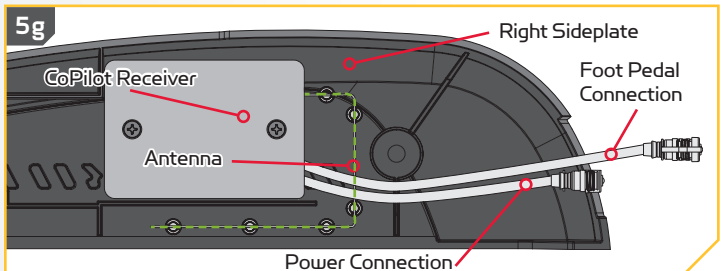
#2 x 1

- e. Turn the Right Sideplate over and position the CoPilot Receiver (Item #2) on the inside of the Right Sideplate so that the receiver mounting holes are aligned with the Sideplate Mounting Holes. Position the wires so that they pass to the right of the CoPilot Receiver. This should consist of a Foot Pedal Connection, a Power Connection and an Antenna wire.
- f. Using the two #8 x 5/8" screws (Item #1) provided, insert the screws through the receiver and into the Right Sideplate. Be sure that the wires are not pinched in the Sideplate Mounting Holes when tightening the two screws. Do not over tighten.



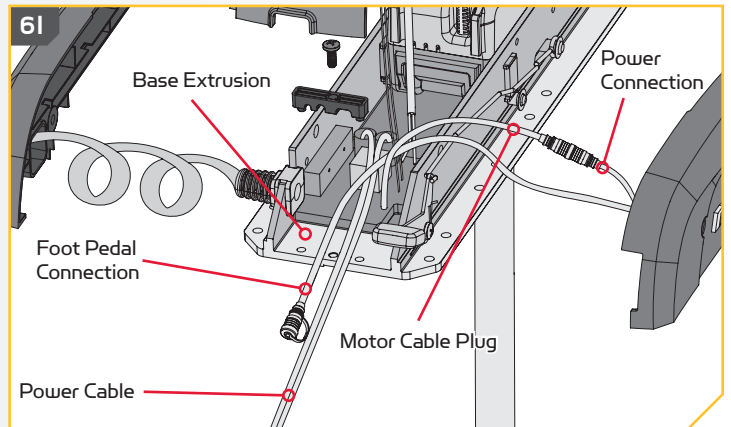
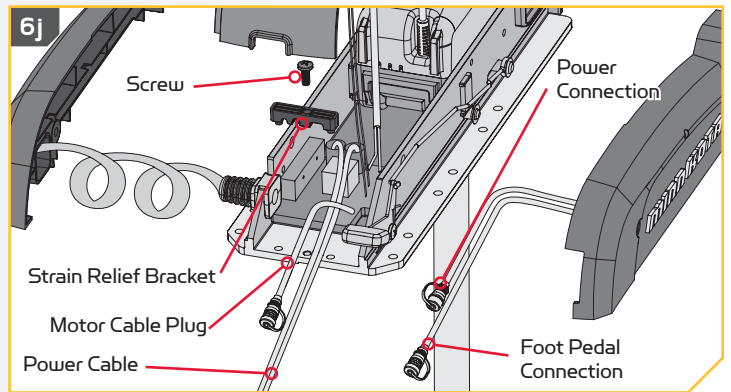
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- g. With the Right Sideplate laying flat, and the CoPilot receiver that was just installed facing upwards, route the yellow wire antenna around the pegs protruding from the Right Sideplate along the right and bottom edge of the CoPilot Receiver. Follow the grooves in each of the pegs.
- h. Deploy the motor.
- i. On the mount, lift the Center Housing to access the components below. The Center Housing can be released by depressing the tabs on each side that keep it latched to the Base Extrusion.



6

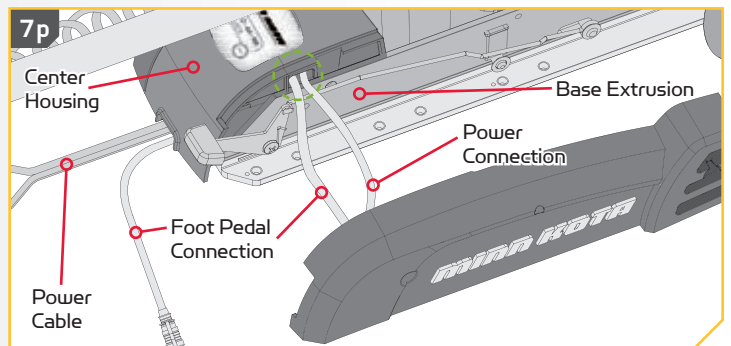
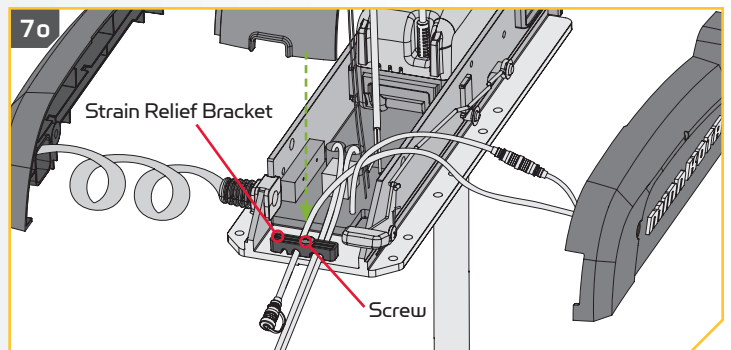
- j. Once lifted, using a #3 Screwdriver, remove the single screw holding the Strain Relief Bracket in place.
- k. Release the Power Cable and Motor Cable Plug from the Strain Relief Bracket.
- l. Connect the Motor Cable Plug that was previously connected to the Foot Pedal to the CoPilot receiver Power Connection that has the female receptacles.
- m. The Foot Pedal Connection from the CoPilot receiver can be connected to the Foot Pedal once the installation is complete.
- n. Place the Power Cable and the Foot Pedal Connection from the CoPilot Receiver on the Base Extrusion so that it can be captured in the Strain Relief Bracket.



7

- o. Using a #3 Screwdriver, replace the screw that was holding the Strain Relief Bracket in place.
- p. Be sure that the wires are routed in a way that they can not be pinched and reseat the Center Housing in place.

NOTE: The wires should pass under the Center Housing over the Base Extrusion in the notch that creates a separation from the base and the housing. The connection between the Motor Cable Plug and the Power Connection should be under the Center Housing when it is seated.

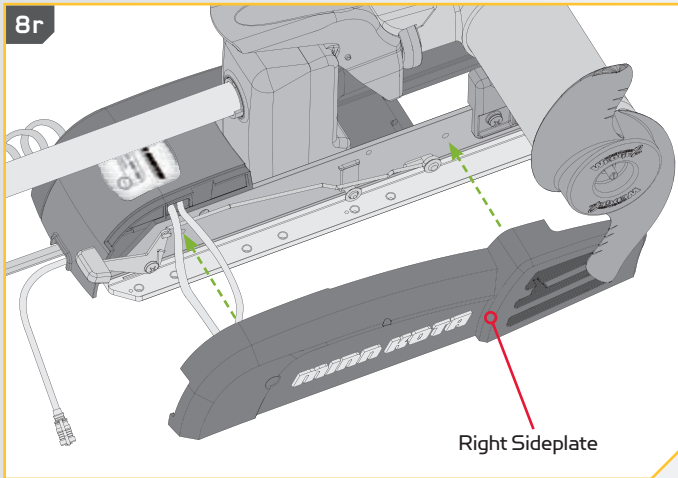


INSTALLATION

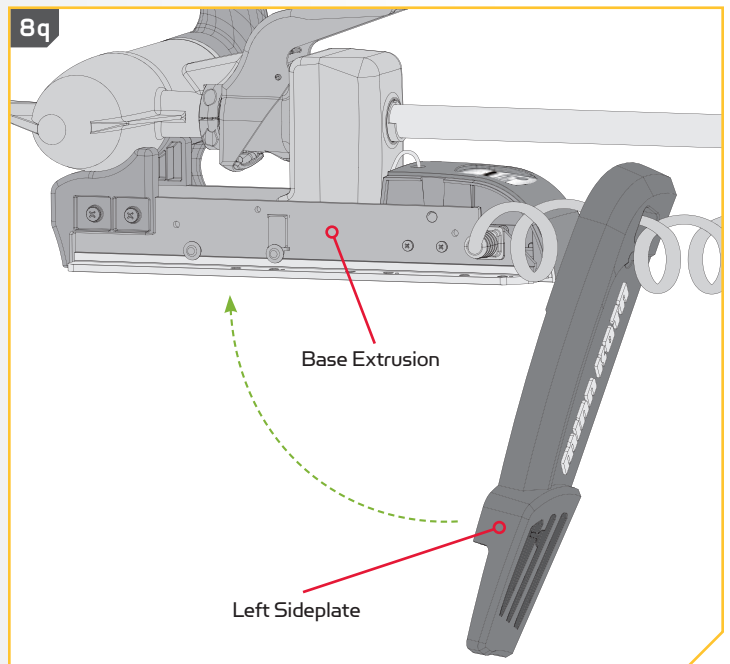
8

- q. Once the wires are in place and the Center Housing is seated, stow the motor to replace the Left Sideplate
- r. Replace the Right Sideplate.

8r

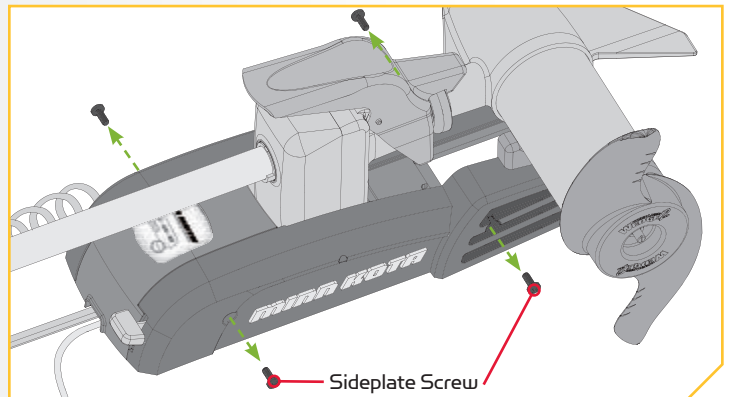


8q



9

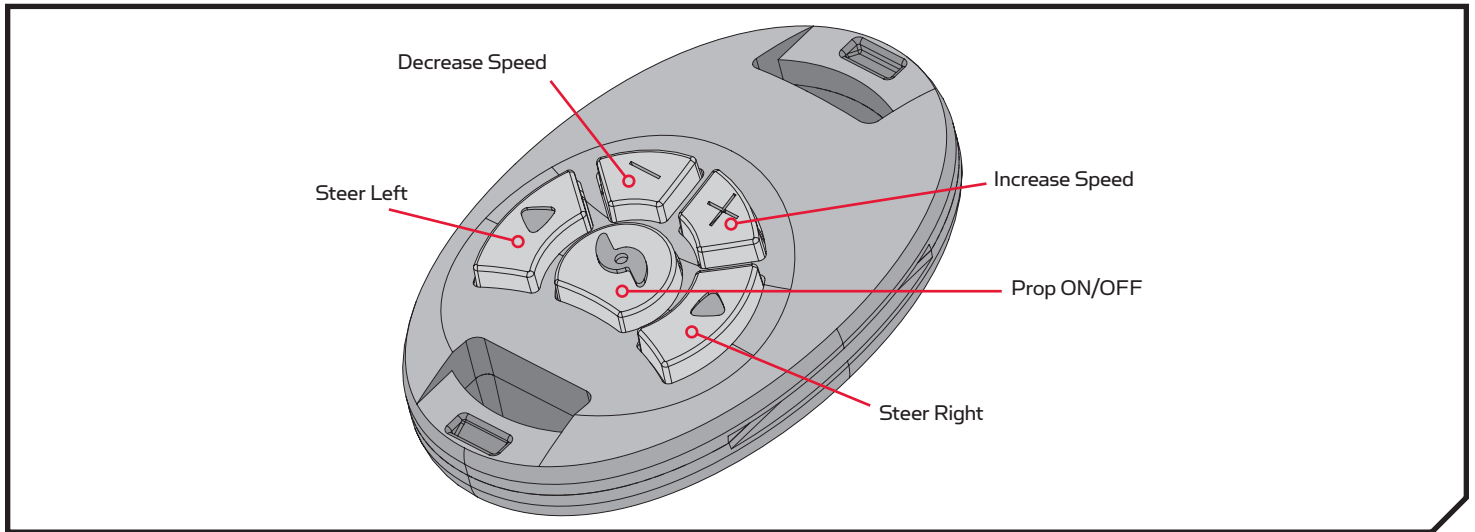
- s. Using a #2 Phillips Screwdriver, replace the four 1/4-20 x 5/8" Screws from the Right Sideplate and Left Sideplate of the PowerDrive mount.



COPILOT

CONTROLLING THE MOTOR WITH COPILOT

Review the complete CoPilot section of this manual to become familiar with this feature.



Prop ON/OFF

This button is located in the middle of the remote. It turns the propeller on or off. Press the button once to turn the propeller ON; press button a second time to turn it OFF. The button does not need to be held down.

Steer Left & Steer Right

These buttons are located to the right and left of the Prop ON/OFF button and have an arrow symbol. They cause the motor to turn in the desired direction as long as the button is held down. If the Steer Right or Steer Left button is held for more than seven seconds, the steering will automatically stop until the button is pressed again.

Increase Speed & Decrease Speed

The Increase Speed and Decrease Speed buttons are located on the top of the remote and are identified with a positive and negative symbol. Pressing and releasing these buttons causes the speed to increase or decrease by increments of 1. The speed is adjustable from level 0-10. At level 0, the prop will not turn.

In audio mode 2, an audible beep is heard for each increment when changing 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 helps prevent unintentional activation of the propeller if the prop on/off remote button is inadvertently pressed.

COPILOT GENERAL OPERATION

Operating with the Remote and Foot Pedal

- When the Momentary/Constant Switch on the Foot Pedal is in the CON position or when the Momentary Button is held, the receiver WILL NOT RESPOND to any remote commands. When remote commands are received, the receiver will emit an audible chirp. This will indicate that the remote is functioning properly, but the Foot Pedal is active and is overriding the remote.
- When the Momentary/Constant Switch is in the MOM position, the operator may begin using the remote at any time.

COPILLOT

- As soon as any remote button is pressed, the initial speed setting will be set to approximately the same value as the Speed Control value on the Foot Pedal. The prop will not automatically turn on until the Prop ON/OFF button on the remote is pressed.
- Pressing the Momentary Button on the Foot Pedal or adjusting the Speed Control dial will override the remote and receiver function. Control of the motor will automatically go to the Foot Pedal. The prop speed will also revert to the current value of the Speed Control dial on the Foot Pedal.

Operating without the Foot Pedal

- If the foot pedal is not being used, the CoPilot receiver will always react to any commands from the CoPilot remote.

AUDIO MODES

There are three receiver Audio Modes available. The unit is factory set to Audio Mode 2. To switch from one audio mode to another, simultaneously press and hold the increase and decrease speed buttons for one second. The receiver will respond with 1, 2 or 3 audible beeps indicating the corresponding receiver audio mode change.

Audio Mode	Function
Mode 1	All of the normal audible sounds mentioned in this owners manual, but no audible beeps for speed increase/decrease or prop on/off.
Mode 2	Same as audio mode 1 plus an audible beep for speed increase / decrease and prop on/off.
Mode 3	Same as audio mode 2 plus the prop on audible tick every 1.5 seconds.

NOTE: When the Foot Pedal is operating the motor and the propeller is on, the prop on indicator tick will be heard if the receiver is set to Audio Mode 3.

Audio Pattern	What Condition Causes Audio Pattern	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	Modes 2 and 3
Single tick every 1.5 seconds	When the Prop is active including when Speed Control dial is set to 0	Mode 3
1 Beep	Switching to audio Mode 1	All
2 Beeps	Switching to audio Mode 2	All
3 Beeps	Switching to audio Mode 3	All
1 Chirp	Every time the receiver is powered up and there is at least one remote learned	All
2 second long Beep	Every time the receiver is powered up and there are no remote learned	All
5 Beeps	Speed Control dial on Foot Pedal 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	Heard after a remote button is pressed while the receiver learns it.	All
Ten second warbling sound that transitions into a steady tone	Heard during the process used to clear all stored remote after the learn switch is released, a 2 second long beep will be heard	All
1 long Beep, 2 short Beeps, pause (repeat)	Powered up with Momentary/Constant Switch in the CON position (or the Momentary Button held) when the Foot Pedal is moved to momentary, the power up audio will be heard	All

ADDING/REMOVING REMOTES

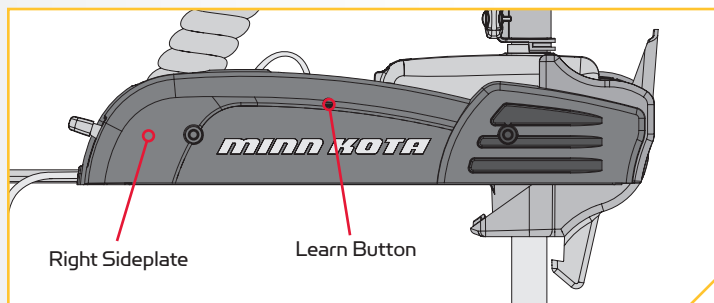
The CoPilot remote came from the factory already "Learned" by the CoPilot receiver. Any additional remotes must be "Learned" by the receiver. The receiver stores all "Learned" information even when the motor is disconnected from a power source.

To "Learn" Remotes

Your receiver may learn up to ten remotes. Any additional remotes can be "Learned" using the following steps. This will also work to "Learn" any remote if all remotes are erased from the receiver.

1

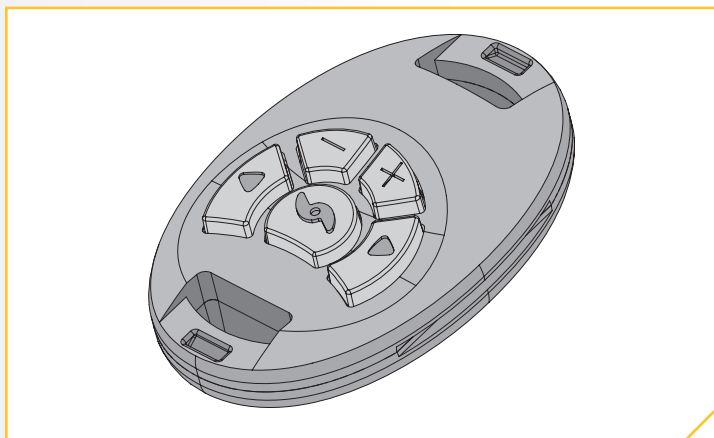
- a. Using a small blunt object such as a pen or screwdriver, press and hold the Learn Button located on the side of the receiver.
- b. The receiver will emit a continuous tone.



2

- c. Press any button on the remote.
- d. The receiver will beep 4 times confirming that it has "Learned" the remote successfully.

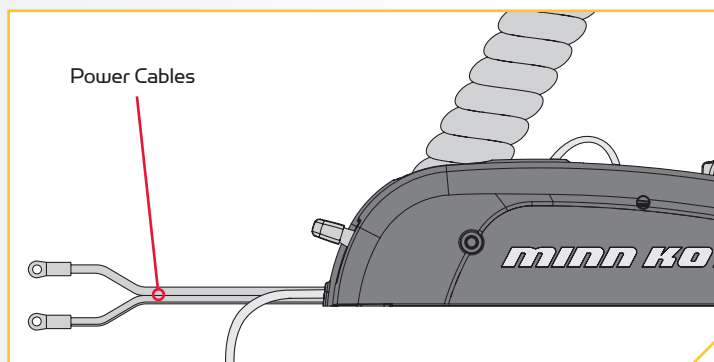
NOTE: "Learning" the same remote will not overwrite previously "Learned" remotes. If the receiver has "Learned" ten remotes, "Learning" an eleventh remote will overwrite the first remote.



To Erase All Remotes from the Receiver

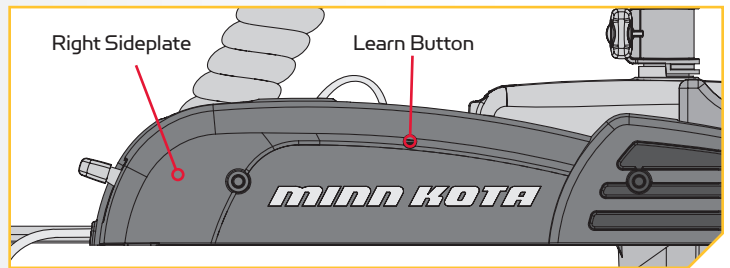
1

- a. Remove power from the CoPilot receiver by disconnecting the Power Cables, or by making sure that the breaker, if equipped, is "off".



2

- b. Press and hold the Learn Button and power up the CoPilot receiver by reconnecting the Power Cables, or by making sure that the breaker, if equipped, is "on".
- c. Continue to 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.
- d. 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".



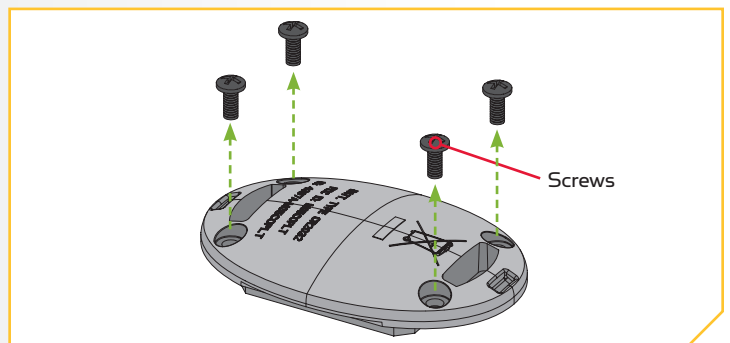
REPLACING THE BATTERY

1

- a. Temporarily ground yourself by touching a grounded metal object in order to discharge any static electricity in your body.

NOTE: The replacement battery must be a model CR2032 coin cell type. It is strongly recommended that a name brand battery is used.

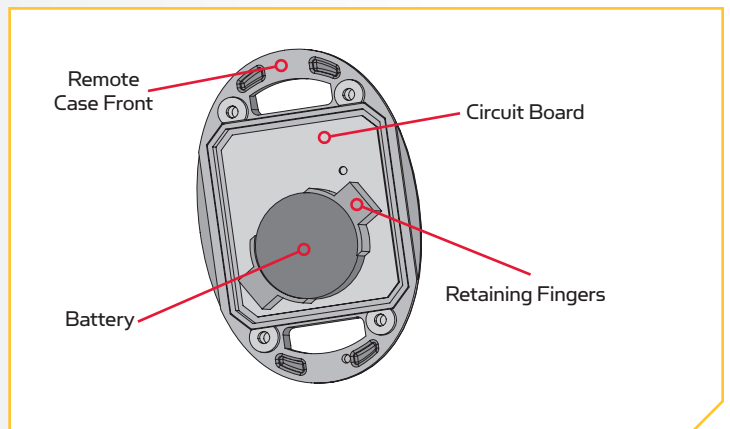
- b. Remove the four screws on the bottom of the remote case.
- c. Separate the case halves to access the circuit board.



2

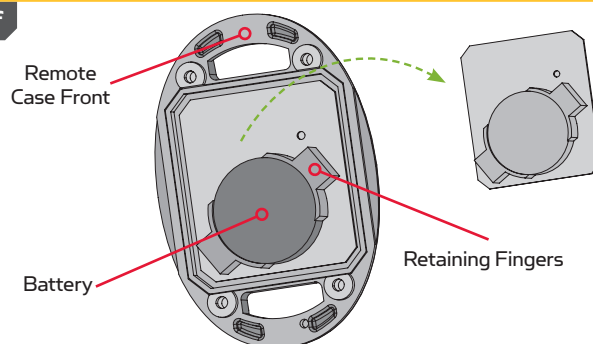
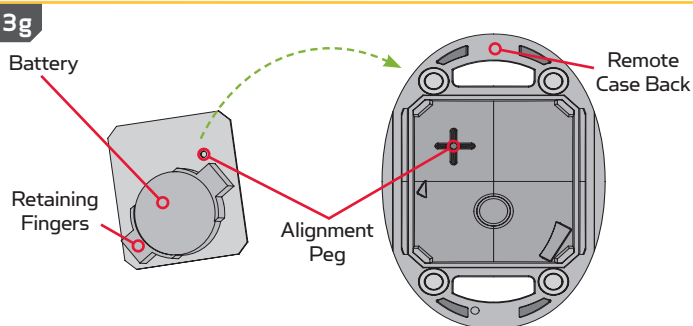
- d. To remove the Battery, place the tip of a finger or thumb under the exposed edge of the Battery and pry it upwards.
- e. Install the new battery with the positive (+) side of the Battery facing up and away from the Circuit Board. Ensure Battery is snapped securely in place.

NOTE: The replacement battery must be a model CR2032 coin cell type. It is strongly recommended that a name brand battery is used.

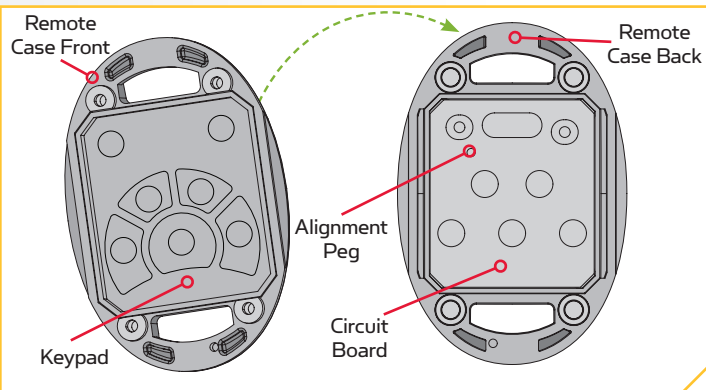


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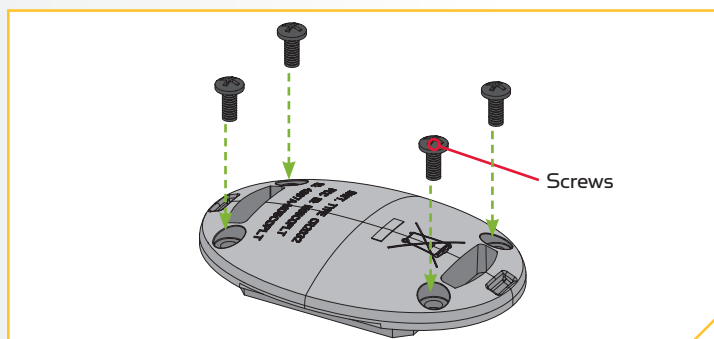
- f. Reassemble the remote. Begin by removing the board from the front of the remote case. This is the same board that holds the battery. Leave the Keypad in place on the front of the remote.
- g. Note that the alignment peg in the back of remote case must line up with the corresponding alignment hole in the circuit board. Place the board with the battery facing down on the back of the remote case.

3f**3g****4**

- h. Position the back of the remote case so that the Alignment peg is towards the top when the remote is laying on a flat surface. Position the front of the remote case so the keypad and the curved buttons are towards the bottom when the remote is laying on a flat surface.
- i. Keep the back of the Remote Case flat. Place the front of the Remote Case, with the Keypad in place, on the back of the Remote Case. Make sure the Case is seated.

**5**

- j. Reinstall the four case screws and tighten them as required.



COMPLIANCE STATEMENTS

ENVIRONMENTAL COMPLIANCE STATEMENT

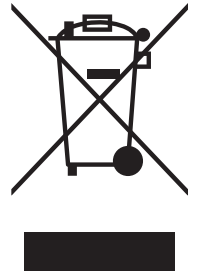
It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

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 wheelie 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 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 requirements 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.

REGULATORY COMPLIANCE INFORMATION

Model: CoPilot

- IC: 4397A-M05COPLT
- FCC ID: M05COPLT



FCC COMPLIANCE

This device complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions:

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

Changes or modifications not expressly approved by Johnson Outdoors Marine Electronics, Inc. could void the user's authority to operate this 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 a particular installation. **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.

INDUSTRY CANADA COMPLIANCE

This product meets the applicable Industry Canada technical specifications. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Johnson Outdoors Marine Electronics, Inc. could void the user's authority to operate this equipment.

ENVIRONMENTAL RATINGS

Ambient operating temperature range: -10C to 50C

Ambient operating humidity range: 5% to 95%

Maximum operating altitude: 10,000 feet

RADIO OPERATION

- Frequency band: 433.92 MHz
- Maximum RF power transmitted: +7 dBm

SERVICE & MAINTENANCE

TROUBLESHOOTING

Cause	Effect	Solution
Remote is not transmitting.	The battery is discharged.	Replace battery.
	Receiver may not have "learned" the remote.	Remote needs to be learned. See the Adding/Removing Remotes section of this manual to learn the remote.
	With the foot pedal connected, the MOM-CON switch is in the CON position. An audio response will be heard if a button is pressed with the foot pedal in the CON position.	The foot pedal switch must be placed in Momentary Mode (MOM). The receiver will not accept any commands from the remote with the switch in the Constant Mode (CON) position.
	If remote has been taken apart, the keypad and top case may have been installed backwards.	Take remote apart. See the Replacing the Battery section of this manual and reinstall case halves with the proper orientation.
When receiver is powered up, it sounds a beep pattern (1 long beep, 2 short beeps, pause, repeat).	The foot pedal Momentary/Constant Switch is in the CON position.	The foot pedal switch must be placed in the MOM position. The beeping sound will continue until the switch is placed in the MOM position.
The prop is not turning but the Prop ON audio pattern is still going.	Prop Speed is set at "0".	Increase the Prop Speed above "0"
	The Prop ON audio pattern occurs only in Audio Mode 3	Switch Audio Mode to either Audio 1 or 2. See the Audio Modes section of this manual.

FOR FURTHER TROUBLESHOOTING AND REPAIR

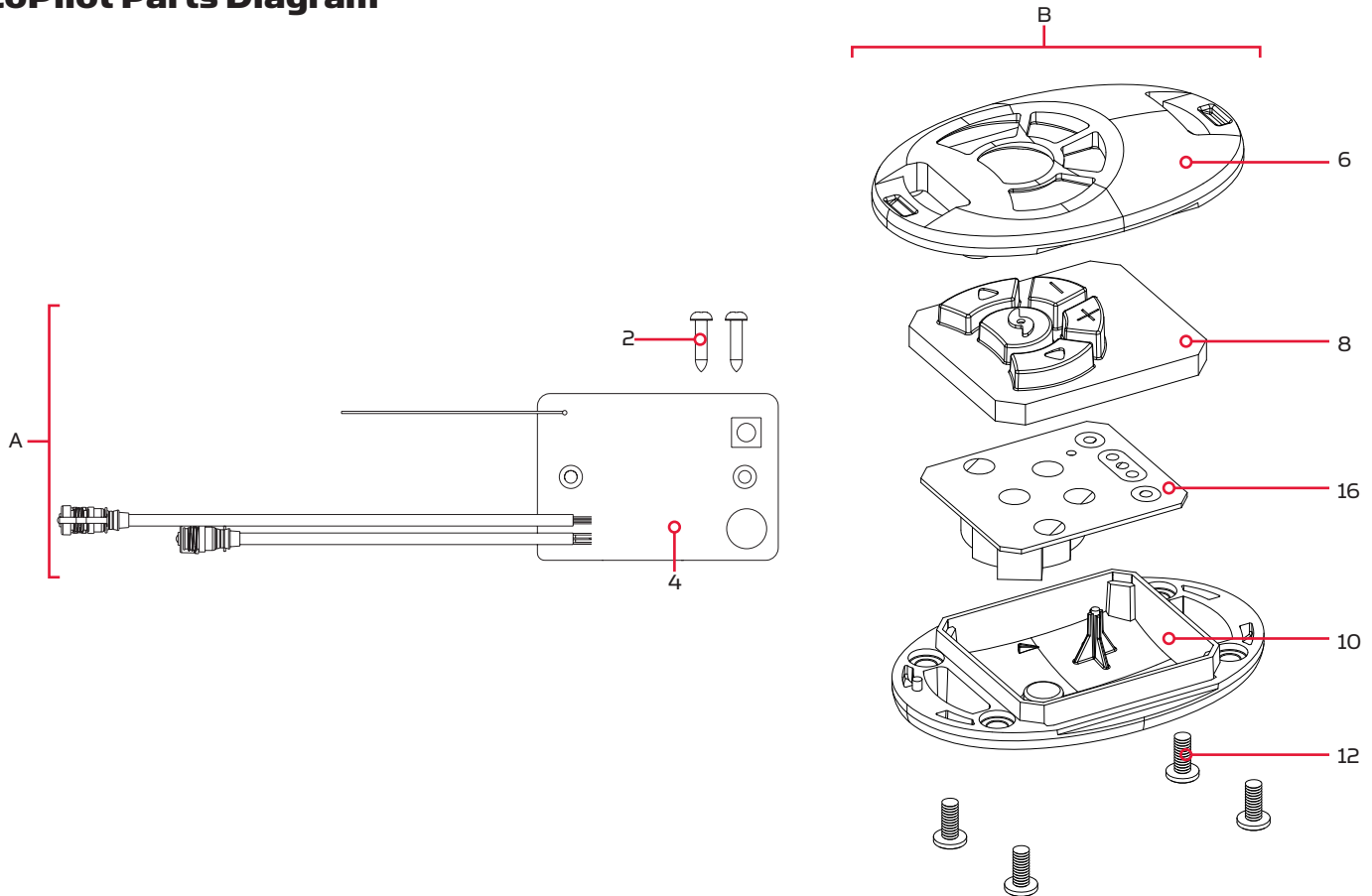
We offer several options to help you troubleshoot and/or repair your product. Please read through the options listed below.

PARTS DIAGRAM & PARTS LIST

COPILOT ACCESSORY

PowerDrive

CoPilot Parts Diagram



CoPilot Parts List

Assembly	Part #	Description	Quantity
A	2994112	CTRL BOARD V2 COPILOT RECEIVER	1
B	2994020	TRANSMTR, ASY, PD/AP COPLT	1
Item	Part #	Description	Quantity
2	2373418	SCREW-#8 X 5/8 PPHSMS S/S	2
4	2374092	CTRL BOARD V2 COPILOT RECEIVER	1
6	2372500	CASE, COVER, TRANSMITTER ASY	1
8	2375110	KEYPAD, TRANSMITTER ASSY	1
10	2372505	CASE, BOTTOM, TRANSMITTER ASSY	1
12	2373440	SCREW-#4-24 X 1/4	4
14 ▲	2005621	DECAL - CE/RCM/WEE CMLPNC.MARK	1
16	✘	CTRL BOARD, TRANS, ASSY, TERROVA	1

✘ This part is included in an assembly and cannot be ordered individually.

▲ Not shown on Parts Diagram.

RECOMMENDED ACCESSORIES

ON-BOARD & PORTABLE BATTERY CHARGERS

Stop buying new batteries and start taking care of the ones you've got. Many chargers can actually damage your battery over time – creating shorter run times and shorter overall life. Digitally controlled Minn Kota chargers are designed to provide the fastest charge that protect and extend battery life.



MK212PC



MK210D



MK110P

TALON SHALLOW WATER ANCHOR

Talon deploys faster, holds stronger and runs quieter than any other shallow water anchor. Available in depths up to 12' and bold color options including camo, it boasts an arsenal of features and innovations that no other anchor can touch:



- Vertical, Multi-Stage Deployment
 - User-Selectable Anchoring Modes
 - 2x Anchoring Force
 - Fast Deploy
 - Auto Up/Down
 - Triple Debris Shields
 - Built-In Wave Absorption
 - Noise Dissipation
 - Versatile Adjustments
-

MINN KOTA ACCESSORIES

We offer a wide variety of trolling motor accessories, including:



- 60-Amp Circuit Breaker
- Mounting Brackets
- Stabilizer Kits
- Extension Handles
- Battery Connectors
- Battery Boxes
- Quick Connect Plugs

Rely only on high-grade boat motors offered on our virtual shelves.