



#55-3556-1 Rev.C
Printed 2-2014

PRECAUTIONS

- **WATER & ELECTRONICS DON'T MIX** Never allow water, moisture, or other foreign materials to get inside motor.
- **INSULATE WIRES** Always insulate exposed wiring with heat shrink tubing to prevent short circuits.
- **NO SOLVENTS** Do NOT expose the motor to any type of solvents.
- **MOTOR CAPACITORS** Brush motors generate electrical noise. Install all 3 capacitors on the motor to help prevent radio interference.
- **NO SCHOTTKY DIODES WITH REVERSIBLE ESCs** NEVER use Schottky diodes on the motor with reversible ESCs—ESC damage will occur.
- **SET GEAR MESH PROPERLY** Too tight of a gear mesh can result in motor pinion shaft breakage—be sure to adjust mesh properly.

MOTOR MAINTENANCE

- **CHECK MOTOR BUSHINGS & BRUSH WEAR**
After extensive use, your motor's bushings or commutation brushes may need replacement. A small drop of light oil on the bushings periodically can help extend bushing life—however, too much oil will attract dirt and will cause problems, so apply sparingly & wipe clean.
- **CLEAN INSIDE MOTOR**
Periodically blow out the inside of the motor with compressed air.

ACCESSORIES

- 5512 12GA Super-Flex Wire—Black, Red, & Blue—3 ft each color, silicone.
- 5514 14GA Super-Flex Wire—Black, Red, & Blue—3 ft each color, silicone.
- 5516 16GA Super-Flex Wire—Black, Red, & Blue—3 ft each color, silicone.
- 5626 Glitch Buster Capacitor—Stores battery power for receiver to eliminate radio cut-out.
- 5647 Black Cooling Fan—25x25x10mm—All purpose cooling fan with 2-pin JST connector.
- 5651 Black Cooling Fan—25x25x10mm—Cooling fan 2-Pack with 2-pin JST connector.
- 5731 Power Connectors—3.5mm—5 pair—Gold-plated low-loss connectors. Includes heat shrink.
- 5741 Power Connectors—4mm—5 pair—Gold-plated low-loss connectors. Includes heat shrink.
- 5831 Lead-Free 3% Silver Solder—6gr—Low-resistance, high-conductivity solder.
- 5832 Lead-Free 3% Silver Solder—15gr Tube—Low-resistance, high-conductivity solder.
- 5833 Lead-Free 3% Silver Solder—100gr Spool—Low-resistance, high-conductivity solder.
- 5840 Double-Sided Mounting Tape—10pcs—1"x1" high-performance clear mounting tape.
- 5842 Double-Sided Mounting Tape—25pcs—1"x1" high-performance clear mounting tape.
- 5841 Double-Sided Mounting Tape—100pcs—1"x1" high-performance clear mounting tape.
- 5850 Heat Shrink Tubing Assortment—6pcs—6" pieces in 6 sizes from 1/16-3/8"—Black.
- 5851 Heat Shrink Tubing Assortment—24pcs—6" pieces in 6 sizes from 1/16-3/8"—Black.
- 5852 Heat Shrink Tubing Pre-Cut—40pcs—1" pieces in 1/4" size—20 each of Red & Black.
- 5853 Heat Shrink Tubing Box Set—160pcs—4" pieces in 6 sizes from 1/16-3/8"—Black.
- 5861 Pro Solder Flux—10ml—Liquid rosin flux for easy soldering of lead-free solders—Dropper bottle.

NOVAK R/C, INC.

Phone: (949) 916-6044 • Monday-Thursday

E-Mail: cs@teamnovak.com Web: www.teamnovak.com

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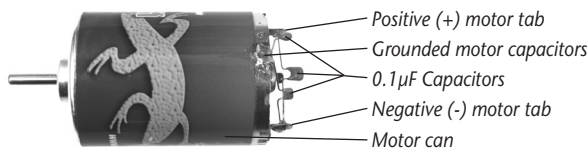
INSTALLATION INSTRUCTIONS

1. INSTALL MOTOR CAPACITORS

Electric motors generate RF noise that causes interference. The included 0.1µF (50V) [Novak #5620] non-polarized, ceramic capacitors must be used on all Terra Claw motors to reduce motor noise and prevent ESC damage.

Solder 0.1µF (50V) capacitors between:

- POSITIVE (+) motor tab & NEGATIVE (-) motor tab.
- POSITIVE (+) motor tab & Motor Can
- NEGATIVE (-) motor tab & Motor Can



Make sure NOT to touch motor capacitor leads to motor can, except for the two motor capacitors that are grounded to the can.

2. INSTALL PINION GEAR

Install pinion on motor and align pinion and spur gears. Tighten pinion's set screw on the flat of motor shaft.

3. ADJUST MOTOR FOR PROPER GEAR MESH

- Adjust the motor position for proper amount of free play. **You NEED a small amount of play between the pinion gear and the spur gear (about the thickness of a piece of paper)—check the free play at several positions around the spur gear to ensure a proper mesh (just in case the gears are out of round).**

MAKE SURE THE GEAR MESH BETWEEN THE PINION & SPUR GEARS IS NOT TOO TIGHT!

If gear mesh is too tight, motor shaft breakage can occur.

- Tighten motor mounting screws—Avoid using excessive force that could break screws or strip the threaded holes in motor.

4. SOLDER MOTOR POWER WIRES

- Determine the best routing in vehicle for power wires. **Prepare ends of motor power wires** by stripping 1/8–1/4" of insulation from end of wire. Tin wire ends with solder.
- **Lay tinned end of the wire flat on the solder tab and solder wires to proper tabs of the motor.** Apply heat with soldering iron to the power wire and solder tab—begin adding solder to tip of iron and to wire—**Add just enough solder to form a clean & continuous joint from the solder tab up onto the wire.**

PRODUCT WARRANTY

Novak products are guaranteed to be free from defects in materials or workmanship for a period of 120 days from the original date of purchase (verified by dated, itemized sales receipt). Warranty does not cover incorrect installation, components worn by use, cross-connection of battery/motor power wires, overheating solder tabs, damage resulting from overload, wear or damage from improper gear mesh or damage from disassembling motor, tampering with motor, allowing water, moisture, or any other foreign material to enter motor, allowing exposed wiring or solder tabs to short-circuit, or any damage caused by a crash, flooding, or natural disaster. In no case shall our liability exceed the product's original cost. We reserve the right to modify warranty provisions without notice.

Because Novak R/C, Inc. has no control over the connection & use of motor or other related electronics, no liability may be assumed nor will be accepted for damage resulting from the use of this product. Every motor is tested before leaving our facility and is, therefore, considered operational.

By the act of connecting motor to speed control or operating motor, the user accepts all resulting liability.



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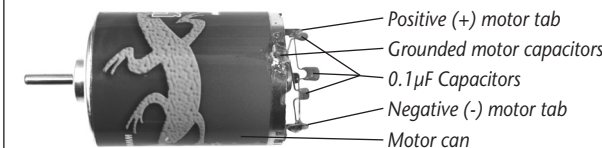
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Terra Claw

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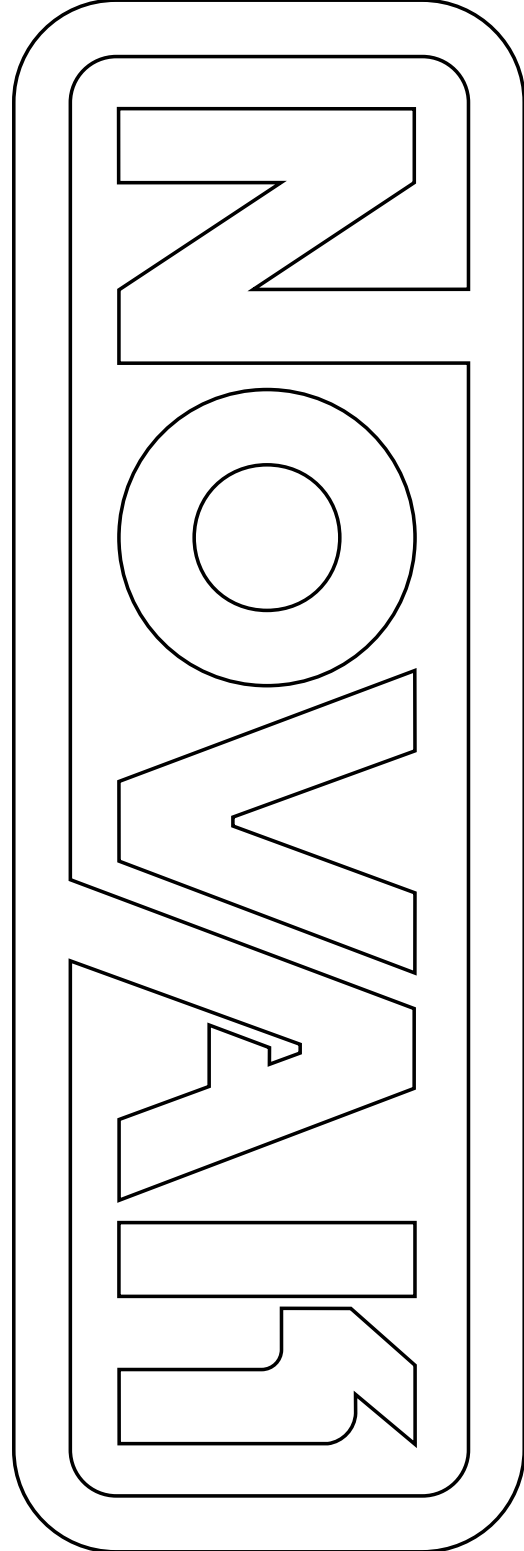
WARNING This product contains chemicals which are known to the state of California to cause cancer, birth defects, or other reproductive harm.



Novak R/C, Inc. guarantees the Terra Claw motor to be free from defects in materials & workmanship for a period of 120 days from original date of purchase. Complete warranty details inside. 2014 NOVAK R/C, Inc. #55-3556-1.C All Rights Reserved.

The Novak Terra Claw Brushed Motors are high-quality, durable, & economical. These powerful motor are perfect for rock crawling and other applications that require good low-end torque, precise movement control, and high-efficiency for extended run times.

Terra Claw



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