PREPARATION FOR IGNITION

1. Install the RMS-RC motor into the vehicle’s motor mount tube. Secure the motor into the vehicle by using a motor hook, friction fit, or wrapping tape around the joint where the motor meets the end of the rocket motor tube. If using a motor hook, be sure to hold the hook away from the motor during insertion into the motor tube to prevent the hook from scraping the motor casing. Position the hook tab into the slotted recess in the aft closure.

2. Install the vehicle on the launch pad or make any other preparation required before hooking up the igniter.

3. Attach the electrical launch controller leads to the COPPERHEAD igniter as described below and launch the vehicle as shown in the product instructions.

POST-FIRING CLEANUP

1. After the motor has cooled down, remove the aft closure. Using a wet wipe or damp paper towel, remove any propellant residue from the closure.

2. Remove the nozzle, O-ring, and liner assembly and discard.

3. Using a wet wipe or a damp paper towel, wipe the inside of the casing to remove all propellant residue.

4. Apply a light coat of grease to all threads and the inside of the casing to remove all propellant residue.

FIRST AID

For a minor burn, apply a burn ointment. For a severe burn, immerse the burned area in ice water at once and see a Physician as quickly as possible. In the unlikely event of oral ingestion of the propellant, delay or ejection charge, induce vomiting and see a physician as quickly as possible. The AeroTech/RCS composite rocket propellant consists of ammonium perchlorate and a rubber-like plastic elastomer.

DISPOSAL

Damaged or defective reloads should be returned to RCS.

NOTE: As we can not control the storage and use of our products, once sold we cannot assume any responsibility for product storage, transportation or usage. RCS shall not be held responsible for any personal injury or property damage resulting from the handling, storage or use of our product. The buyer assumes all risks and liabilities therefrom and accepts and uses AeroTech/RCS products on these conditions. No warranty either expressed or implied is made regarding AeroTech/RSC products, except for replacement or repair, at RCS’s option, of those products which are proven to be defective in manufacture within one year from the date of original purchase. For repair or replacement under this warranty, please contact RCS. Proof of purchase will be required. Note: Your state may provide additional rights not covered by this warranty.

PREVENTION OF FIRE

Aerospace grade propellant will not explode when ignited properly. Tests show that composite propellant reload kits will not explode in fires and normally will not ignite unless subjected to direct flame and then will burn slowly. Use water to fight fires in which AeroTech/RCS composite propellant RMS reload kits may become involved: direct the water at the AeroTech/RCS RMS reload kits to keep them below their 550˚F autoignition temperature. Foam and carbon dioxide fire extinguishers will NOT extinguish burning propellant of the type used in AeroTech/RCS composite propellant RMS reload kits.

REQUIRE 12 VOLT LAUNCH SYSTEM

RC 32/60 (F16-RCJ) RCS

Part # 20040 Rev: 4/27/04
Made in the U.S.A.
©2004 RCS Rocket Motor Components, Inc. All rights reserved.
**RMS-RC™ 32/60-100 Assembly and Operation Instructions**

### BEFORE YOU BEGIN:

- Study the illustrations and sequence of assembly. THE SEQUENCE OF ASSEMBLY IS EXTREMELY IMPORTANT. USE RMS™ MOTORS AND RELOAD KITS ONLY IN ACCORDANCE WITH ALL INSTRUCTIONS. Review the parts list and become familiar with all parts before assembly. IF ANY PARTS ARE MISSING OR DAMAGED, CONTACT RCS AT 1 (435) 865-7100 or email at: warranty@aerotech-rocketry.com
- **DO NOT MODIFY THE MOTOR OR THE RELOAD KITS IN ANY WAY!** Modifications of motor or reload kit parts could result in motor failure and lead to the destruction of both your R/C vehicle and motor and will invalidate your motor warranty.
- **USE ONLY AeroTech/RCS RELOAD KITS AND MOTOR PARTS TO REFURBISH YOUR RMS!** The AeroTech/RCS reload kits have been designed specifically for use in your particular AeroTech/RCS RMS-RC Motor. Use of imitation components may destroy your motor, R/C vehicle and radio and will invalidate your motor warranty. Only use parts from the AeroTech/RCS reload kit intended for your specific motor. **DO NOT INTERCHANGE PARTS!** Do not use AeroTech/RCS reload kits or motor components for any other purpose than to refurbish an AeroTech/RCS RMS-RC motor.
- **DO NOT REUSE ANY OF THE DISPOSABLE PARTS OF THE RELOAD KIT.** This includes the liner, O-ring, and nozzle insert. These components have been designed for one use only and must be discarded after firing. Reuse can result in motor failure during subsequent operation and will invalidate your motor warranty.
- **DO NOT USE ANY PARTS OF THE RMS-RC SYSTEM THAT ARE DAMAGED IN ANY WAY!** Do not use an RMS-RC reload kit that is missing parts. If in doubt, contact RCS at the number above for assistance.

### PARTS:

<table>
<thead>
<tr>
<th>PARTS</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS-RC 32/60-100 MOTOR</td>
<td>1</td>
</tr>
<tr>
<td>Liner (1-1/8&quot; O.D. tube)</td>
<td>2</td>
</tr>
<tr>
<td>Propellant Grain (solid slotted part)</td>
<td>2</td>
</tr>
<tr>
<td>Aft O-Ring (1-1/8&quot; thick x 1-1/8&quot; O.D.)</td>
<td>2</td>
</tr>
<tr>
<td>Nozzle (black plastic part)</td>
<td>2</td>
</tr>
<tr>
<td>COPPERHEAD™ Igniter</td>
<td>2</td>
</tr>
<tr>
<td>Forward Insulator (1&quot; O.D. fiber disk)</td>
<td>2</td>
</tr>
</tbody>
</table>

### ITEMS NEEDED FOR USE:

- Wet wipes or damp paper towels
- Remotely operated electrical ignition system

1. Apply a light coat of grease to the Aft O-ring and all threaded surfaces. This will facilitate assembly and prevent the threads from seizing. **NOTE:** When all the grease that comes with the motor has been consumed, use petroleum jelly or similar grease.
2. Using your fingernail or a blunt object, remove the burr (rough raised edge) from both inside and outside ends of a liner tube by pressing or scraping and rotating the tube at the same time.
3. **Fig-1:** Insert a propellant grain into the liner tube until one end is recessed approximately 1/16” from one end of the liner tube. The propellant grain will also be recessed approximately 3/16” from the other end of the liner tube. **Fig-2:** Install the forward insulator (1” O.D. fiber disk) into the end of the liner tube where the propellant grain is recessed 1/16” from the end of the tube. The forward insulator should now be flush with the end of the liner tube.
4. **Fig-3:** Install the forward insulator (1” O.D. fiber disk) into the end of the liner tube where the propellant grain is recessed 1/16” from the end of the tube. The forward insulator should now be flush with the end of the liner tube.
5. **Fig-4:** Insert the large (wide) end of the nozzle into the liner tube until it is seated against the end of the propellant grain.
6. **Fig-5:** Place the greased Aft O-ring into the groove between the nozzle and the case.
7. **Fig-6:** Thread the aft closure into the motor case by hand until it stops against the case.
8. **Fig-7:** Insert the coated (black) end of a COPPERHEAD igniter through the nozzle throat and into the slot in the propellant grain until the igniter stops against the forward insulator disk.
9. **Fig-8:** Secure the igniter lead to the nozzle using a small piece of masking tape.

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**RMS-RC™ 32/60-100 Motor Kit Parts:**

- Liner Tube (deburred)
- Forward Insulator (1” O.D. fiber disk)
- Aft O-Ring (1/8” thick x 1-1/8” O.D.)
- Nozzle (black plastic part)
- COPPERHEAD™ Igniter
- Liner Assembly
- Motor Case
- Aft O-ring Installed Between Nozzle and Case as Shown

**TANT. USE RMS™ MOTORS AND RELOAD KITS FOR USE IN YOUR PARTICULAR AeroTech/RCS RMS-RC Motor, R/C vehicle and radio and will invalidate your motor warranty. Only use parts from the AeroTech/RCS reload kit intended for your specific motor.**

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**DO NOT USE ANY PARTS OF THE RMS-RC SYSTEM THAT ARE DAMAGED IN ANY WAY!** Do not use an RMS-RC reload kit that is missing parts. If in doubt, contact RCS at the number above for assistance.

**MOTORS ARE NOT AFTER FIRING.** Although the RMS-RC operates at a lower temperature than most disposable motors, the higher thermal conductivity of the aluminum motor parts may make it seem otherwise. If necessary to handle a motor before it has cooled down, use a rag or similar article.

**Comply with all federal, state and local laws in all activities with hobby rockets.**

**DO NOT OPEN RELOAD KITS UNTIL READY TO USE!** Close reload kit bag securely after removing a set of reload components.

**NOTE:** When all the grease that comes with the motor has been consumed, use petroleum jelly or similar grease.

**DAMAGED, CONTACT RCS AT 1 (435) 865-7100 or email at: warranty@aerotech-rocketry.com**

**DOS not MODIFY THE MOTOR OR THE RELOAD KITS IN ANY WAY!** Modifications of motor or reload kit parts could result in motor failure and lead to the destruction of both your R/C vehicle and motor and will invalidate your motor warranty.

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