Foot Controls
RFCS-5, RFCS-5HD, RFCS-6M,
RFCS-14, And RFCS-14HD

OWNER’S MANUAL
From Miller to You

Thank you and congratulations on choosing Miller. Now you can get the job done and get it done right. We know you don’t have time to do it any other way.

That’s why when Niels Miller first started building arc welders in 1929, he made sure his products offered long-lasting value and superior quality. Like you, his customers couldn’t afford anything less. Miller products had to be more than the best they could be. They had to be the best you could buy.

Today, the people that build and sell Miller products continue the tradition. They’re just as committed to providing equipment and service that meets the high standards of quality and value established in 1929.

This Owner’s Manual is designed to help you get the most out of your Miller products. Please take time to read the Safety precautions. They will help you protect yourself against potential hazards on the worksite. We’ve made installation and operation quick and easy. With Miller you can count on years of reliable service with proper maintenance.

And if for some reason the unit needs repair, there’s a Troubleshooting section that will help you figure out what the problem is. The parts list will then help you to decide the exact part you may need to fix the problem. Warranty and service information for your particular model are also provided.

Miller Electric manufactures a full line of welders and welding related equipment. For information on other quality Miller products, contact your local Miller distributor to receive the latest full line catalog or individual specification sheets. To locate your nearest distributor or service agency call 1-800-4-A-Miller, or visit us at www.MillerWelds.com on the web.
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WARRANTY
### 1-1. Safety Symbol Definitions

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>DANGER! - Indicates a hazardous situation which, if not avoided, will result in death or serious injury. The possible hazards are shown in the adjoining symbols or explained in the text.</td>
</tr>
<tr>
<td>!</td>
<td>DANGER! - Indique une situation dangereuse qui, si elle n’est pas évitée, entraînera la mort ou des blessures graves. Les éventuels risques sont représentés par les symboles joints ou expliqués dans le texte.</td>
</tr>
<tr>
<td></td>
<td>ARC RAYS CAN BURN EYES AND SKIN - WEAR A WELDING HELMET WITH CORRECT FILTER, AND COVER EXPOSED SKIN WITH NONFLAMMABLE CLOTHING.</td>
</tr>
<tr>
<td></td>
<td>WEAR SAFETY GLASSES WITH SIDE SHIELDS.</td>
</tr>
<tr>
<td></td>
<td>BREATHING WELDING FUMES AND GASES CAN HARM YOUR HEALTH. WELDING REQUIRES GOOD VENTILATION. IF VENTILATION IS IMPOSSIBLE, SUCH AS WHEN WELDING IN A CONFINED SPACE, USE AN AIR-SUPPLIED RESPIRATOR.</td>
</tr>
</tbody>
</table>

**CALIFORNIA PROPOSITION 65 WARNINGS**

**PROPOSITION CALIFORNIENNE 65 AVERTISSEMENTS**

Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

This product contains chemicals, including lead, known to the state of California to cause cancer, birth defects, or other reproductive harm. Wash hands after use.

Les équipements de soudage et de coupage produisent des fumées et des gaz qui contiennent des produits chimiques dont l’État de Californie reconnaît qu’ils provoquent des malformations congénitales et, dans certains cas, des cancers. (Code de santé et de sécurité de Californie, chapitre 25249.5 et suivants)

Ce produit contient des produits chimiques, notamment du plomb, dont l’État de Californie reconnaît qu’ils provoquent des cancers, des malformations congénitales ou d’autres problèmes de procréation. Se laver les mains après utilisation.
1-2. Typical Connection

⚠️ Turn Off welding power source before connecting foot control.

1 Foot Control
2 Remote 14, Remote 5, Or Remote 6 Receptacle

Insert plug into matching 14-socket, 5-socket, or 6-socket receptacle, as applicable, on welding power source. Tighten collar.

1-3. Remote Amperage Control For Welding Power Source Without Remote Control Switch

Select Weld Process ➔ Select Range And Polarity ➔ Select Maximum Amperage Percentage. 50% = Approx. 33 A DC ➔ Press pedal lightly to turn weld output and gas flow on. Press pedal further to increase weld output. Release pedal to turn off weld output and gas flow.
1-4. Remote Amperage Control For Welding Power Source With Remote Control Switch But Without Output (Contactor) Control

Example Of Combination Front Panel And Remote Amperage Control

See welding power source Owner's Manual to determine if Remote Foot Control works as a combination or as full Amperage control.

In Example:
Min = 30 A In Range A or 40 A In Range B (Unit Minimum)
Max = 95 A In Range A or 200 A In Range B (Control Setting)

Set Switch → Set Desired Maximum Amperage For Application → Press pedal to increase weld output. Release pedal to decrease weld output.

EXAMPLE Of Full Remote Amperage Control

See welding power source Owner's Manual to determine if Remote Foot Control works as a combination or as full Amperage control.

In Example:
Min = 30 A In Range A or 40 A In Range B (Unit Minimum)
Max = 225 A In Range A or 375 A In Range B (Unit Maximum)

Set Switch → Control Setting Does Not Matter → Press pedal to increase weld output. Release pedal to decrease weld output.
1-5. Remote Amperage Control For Welding Power Source With Remote Control Switch And Output (Contactor) Control

EXAMPLE Of Combination Front Panel And Remote Amperage Control

See welding power source Owner’s Manual to determine if Remote Foot Control works as a combination or as full Amperage control.

EXAMPLE Of Full Remote Amperage Control

See welding power source Owner’s Manual to determine if Remote Foot Control works as a combination or as full Amperage control.

Press pedal lightly to turn weld output and gas flow on. Press pedal further to increase weld output. Release pedal to turn off weld output and gas flow.
1-6. Adjusting Potentiometer Timing

 Disconnect foot control from welding power source/generator before adjusting potentiometer.

 Turn unit upside down, and remove bottom plate.

 1. Label

 2. Gear

 Turn gear on potentiometer shaft counterclockwise as far as possible.

 Pull drive belt tight and mesh belt teeth with gear teeth.

 Connect free end of small spring into end of drive belt.

 Reinstall bottom plate

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1-7. Changing Cord Location On RFCS-5HD, And RFCS-14HD Models

 Disconnect foot control from welding power source/generator before changing location of cord.

 1. Bottom Plate

 Turn unit upside down, and remove bottom plate.

 Remove screw that holds cord in its factory installed location.

 2. Cord Slots

 Position cord in desired slot.

 Slide strain relief down cord and into slot to protect cord. Secure cord with screw in the same manner in which it came from the factory.

 Reinstall bottom plate
SECTION 2 – ELECTRICAL DIAGRAMS

Circuit Diagram For RFCS-5, RFCS-5HD, RFCS-14, And RFCS-14HD Models

Circuit Diagram For RFCS-6M Models
### SECTION 3 – PARTS LIST

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Dia. Mkgs.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>182 030</td>
<td>Belt</td>
<td>1 1 1 1 1 1 1</td>
</tr>
<tr>
<td>2</td>
<td>185 929</td>
<td>Pedal / housing / bottom</td>
<td>1 1 1 1 1 1</td>
</tr>
<tr>
<td>3</td>
<td>198 036</td>
<td>Bottom Plate</td>
<td>1 1 1 1 1 1</td>
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<tr>
<td>4</td>
<td>182 627</td>
<td>Spring</td>
<td>1 1 1 1 1 1</td>
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<tr>
<td>5</td>
<td>S1 183 629</td>
<td>Switch, limit 10A 125/250V</td>
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<td>6</td>
<td>271019</td>
<td>Cable, Control (Includes)</td>
<td>1 1 1 1 1 1</td>
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<tr>
<td>7</td>
<td>271022</td>
<td>Cable, Control (Includes)</td>
<td>1 1 1 1 1 1</td>
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<td>8</td>
<td>271021</td>
<td>Cable, Control (Includes)</td>
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<td>9</td>
<td>271018</td>
<td>Cable Control (Includes)</td>
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<td>10</td>
<td>271020</td>
<td>Cable Control (Includes)</td>
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<tr>
<td>11</td>
<td>PGL1 131 204</td>
<td>Connector &amp; Sockets</td>
<td>1 1 1 1 1 1</td>
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<td>12</td>
<td>175 284</td>
<td>Cable 21Ft</td>
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<td>13</td>
<td>199 410</td>
<td>Cable 21Ft</td>
<td>1 1 1 1 1 1</td>
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<tr>
<td>14</td>
<td>199 409</td>
<td>Strain Relief</td>
<td>1 1 1 1 1 1</td>
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<td>15</td>
<td>208620</td>
<td>Cable 13’-3”</td>
<td>1 1 1 1 1 1</td>
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<td>16</td>
<td>219944</td>
<td>Cable 20’</td>
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<td>17</td>
<td>PLG2 039 273</td>
<td>Connector &amp; Sockets</td>
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<td>18</td>
<td>039 685</td>
<td>Connector, clamp str</td>
<td>1 1 1 1 1 1</td>
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<tr>
<td>19</td>
<td>PLG2 144 310</td>
<td>Connector &amp; Sockets</td>
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<td>Spring</td>
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<td>22</td>
<td>R1 264050</td>
<td>Potentiometer, w/Leads</td>
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<tr>
<td>23</td>
<td>RC1 131 203</td>
<td>Connector &amp; Sockets</td>
<td>1 1 1 1 1 1</td>
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</tbody>
</table>

To maintain the factory original performance of your equipment, use only Manufacturer’s Suggested Replacement Parts. Model and serial number required when ordering parts from your local distributor.
Warranty Questions?  
Call 1-800-4-A-MILLER for your local Miller distributor.

Your distributor also gives you ... 
Service  
You always get the fast, reliable response you need. Most replacement parts can be in your hands in 24 hours. 
Support  
Need fast answers to the tough welding questions?  Contact your distributor. The expertise of the distributor and Miller is there to help you, every step of the way.

LIMITED WARRANTY – Subject to the terms and conditions below, Miller Electric Mfg. Co., Appleton, Wisconsin, warrants to its original retail purchaser that new Miller equipment sold after the effective date of this limited warranty is free of defects in material and workmanship at the time it is shipped by Miller. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

Within the warranty periods listed below, Miller will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. Miller must be notified in writing within thirty (30) days of such defect or failure, at which time Miller will provide instructions on the warranty claim procedures to be followed. If notification is submitted as an online warranty claim, the claim must include a detailed description of the fault and the troubleshooting steps taken to identify failed components and the cause of their failure.

Miller shall honor warranty claims on warranted equipment listed below in the event of such a failure within the warranty time periods. All warranty time periods start on the delivery date of the equipment to the original end-user purchaser, and not to exceed twelve months after the equipment is shipped to a North American distributor or eighteen months after the equipment is shipped to an International distributor.

1. 5 Years Parts — 3 Years Labor  
   * Original Main Power Rectifiers Only to Include SCRs, Diodes, and Discrete Rectifier Modules
2. 3 Years — Parts and Labor  
   * Auto-Darkening Helmet Lenses (Except Classic Series) (No Labor)
   * Engine Driven Welder/Generators
   (NOTE: Engines are Warranted Separately by the Engine Manufacturer.)
   * Inverter Power Sources (Unless Otherwise Stated)
   * Plasma Arc Cutting Power Sources
   * Process Controllers
   * Semi-Automatic and Automatic Wire Feeders
   * Transformer/Rectifier Power Sources
3. 2 Years — Parts and Labor  
   * Auto-Darkening Helmet Lenses – Classic Series Only (No Labor)
   * Fume Extractors – Capture 5, Filtair 400 and Industrial Collector Series
4. 1 Year — Parts and Labor Unless Specified  
   * Automatic Motion Devices
   * CoolBelt and CoolBand Blower Unit (No Labor)
   * Desiccant Air Dryer System
   * External Monitoring Equipment and Sensors
   * Field Options
   (NOTE: Field options are covered for the remaining warranty period of the product they are installed in, or for a minimum of one year — whichever is greater.)
   * RFCS Foot Controls (Except RFCS-RJ45)
   * Fume Extractors – Filtair 130, MWX and SWX Series
   * HF Units
   * ICE/XT Plasma Cutting Torches (No Labor)
   * Induction Heating Power Sources, Coolers
   (NOTE: Digital Recorders are Warranted Separately by the Manufacturer.)
   * LiveArc Welding Performance Management System
   * Load Banks
   * Motor-Driven Guns (except Spoolmate Spoolguns)
   * PAPR Blower Unit (No Labor)
   * Positioners and Controllers
   * Racks
   * Running Gear/Trailers
   * Spot Welders
   * Subarc Wire Drive Assemblies
   * Water Coolant Systems
   * TIG Torches (No Labor)
   * Wireless Remote Foot/Hand Controls and Receivers
   * Work Stations/Weld Tables (No Labor)

5. 6 Months — Parts  
   * Batteries
   * Bernard Guns (No Labor)
   * Tregaskiss Guns (No Labor)

6. 90 Days — Parts  
   * Accessory (Kits)
   * Canvas Covers
   * Induction Heating Coils and Blankets, Cables, and Non-Electronic Controls
   * M-Guns
   * MIG Guns and Subarc (SAW) Torches
   * Remote Controls and RFCS-RJ45
   * Replacement Parts (No labor)
   * Roughneck Guns
   * Spoolmate Spoolguns

Miller’s True Blue® Limited Warranty shall not apply to:

1. Consumable components; such as contact tips, cutting nozzles, contactors, brushes, relays, work station table tops and welding curtains, or parts that fail due to normal wear. (Exception: brushes and relays are covered on all engine-driven products.)

2. Items furnished by Miller, but manufactured by others, such as engines or trade accessories. These items are covered by the manufacturer’s warranty, if any.

3. Equipment that has been modified by any party other than Miller, or equipment that has been improperly installed, improperly operated or misused based upon industry standards, or equipment which has not had reasonable and necessary maintenance, or equipment which has been used for operation outside of the specifications for the equipment.

MILLER PRODUCTS ARE INTENDED FOR PURCHASE AND USE BY COMMERCIAL/INDUSTRIAL USERS AND PERSONS TRAINED AND EXPERIENCED IN THE USE AND MAINTENANCE OF WELDING EQUIPMENT.

In the event of a warranty claim covered by this warranty, the exclusive remedies shall be, at Miller’s option: (1) repair; or (2) replacement; or, where authorized in writing by Miller in appropriate cases, (3) the reasonable cost of repair or replacement at an authorized Miller service station; or (4) payment of or credit for the purchase price (less reasonable depreciation based upon actual use) upon return of the goods at customer’s risk and expense. Miller’s option of repair or replacement will be F.O.B., Factory at Appleton, Wisconsin, or F.O.B. at a Miller authorized service facility as determined by Miller. Therefore no compensation or reimbursement for transportation costs of any kind will be allowed.

TO THE EXTENT PERMITTED BY LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL MILLER BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT TORT OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MILLER IS EXCLUDED AND DISCLAIMED BY MILLER.

Some states in the U.S.A. do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, so the above limitation or exclusion may not apply to you. This warranty provides specific legal rights, and other rights may be available, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be waived, the limitations and exclusions set out above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

miller_warr 2015-01
# Owner’s Record

Please complete and retain with your personal records.

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Serial/Style Number</th>
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</table>

<table>
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<tr>
<th>Purchase Date</th>
<th>(Date which equipment was delivered to original customer)</th>
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<table>
<thead>
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<th>Distributor</th>
</tr>
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<table>
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<tr>
<th>Address</th>
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</table>

<table>
<thead>
<tr>
<th>City</th>
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</thead>
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<table>
<thead>
<tr>
<th>State</th>
<th>Zip</th>
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</thead>
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# For Service

*Contact a DISTRIBUTOR or SERVICE AGENCY near you.*

Always provide Model Name and Serial/Style Number.

<table>
<thead>
<tr>
<th>Contact your Distributor for:</th>
<th>Welding Supplies and Consumables</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Options and Accessories</td>
</tr>
<tr>
<td></td>
<td>Personal Safety Equipment</td>
</tr>
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<td>Service and Repair</td>
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<tr>
<td></td>
<td>Replacement Parts</td>
</tr>
<tr>
<td></td>
<td>Training (Schools, Videos, Books)</td>
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<tr>
<td></td>
<td>Technical Manuals (Servicing Information and Parts)</td>
</tr>
<tr>
<td></td>
<td>Circuit Diagrams</td>
</tr>
<tr>
<td></td>
<td>Welding Process Handbooks</td>
</tr>
<tr>
<td></td>
<td>To locate a Distributor or Service Agency visit <a href="http://www.millerwelds.com">www.millerwelds.com</a> or call 1-800-4-A-Miller</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact the Delivering Carrier to:</th>
<th>File a claim for loss or damage during shipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>For assistance in filing or settling claims, contact your distributor and/or equipment manufacturer's Transportation Department.</td>
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