COMPLETE INSTRUCTIONS FOR THE

LEE LOAD-MASTER

Helpful setup and operation videos available on leeprecision.com

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Ammunition reloading can be dangerous if done improperly and should not be attempted by persons not willing and able to read and follow instructions exactly. Children should not be permitted to reload ammunition without strict parental supervision. Always wear safety glasses when reloading and shooting. Ammunition loaded with these tools and data should only be used in modern guns in good condition. We do not accept responsibility for ammunition loaded with these tools or data as we have no control over the manufacture and storage of components or the loading procedure and techniques. Primers and gun powders, like gasoline and matches, can be dangerous if improperly handled or misused. Failure to follow these instructions may result in serious injury or death.

**WARNING** The greatest danger in reloading is the double charge. Should you be interrupted while reloading, or should anything go wrong, take every possible precaution in making sure no round has received a double charge.

Only CCI or REMINGTON brand primers are safe to use with this tool, unless you have the Explosion Deflector installed.

**CAUTION** The reloading of rifle ammunition requires extra care. Because of the extremely high pressures of most rifle ammunition, you must be sure your cases are in good condition. Inspect them before each reloading for damage and wear. Cases must be trimmed. An excessively long case will pinch the bullet in the end of the rifle chamber and cause dangerously high pressure that could damage your gun and cause personal injury.

**LEE GUARANTEE**

Lee reloading products are guaranteed not to wear out or break from normal use for two full years, or they will be repaired or replaced at no charge if returned to the factory. Any Lee product of current manufacture, regardless of age or condition, will be reconditioned to new, including a new guarantee, if returned to the factory with payment equal to half the current retail price.

**IMPORTANT**

**YOU MUST DO THESE BEFORE YOU CAN RELOAD**

1. Bolt to a sturdy bench
2. Install case inserter
3. Adjust the dies
4. Adjust case retainers    VERY IMPORTANT
5. Fill primer feeder with correct primers [ See CAUTION, p. 4 ]
6. Adjust primer seating depth
7. Attach powder measure and adjust for proper charge
8. Fill the powder measure with the correct powder

**ALWAYS WEAR SAFETY GLASSES WHEN RELOADING OR SHOOTING**
Mounting Your Press

Attach your press to a sturdy workbench with ¼" bolts. Three are required. Mounting distance is the same as the Lee Pro1000 and Turret Press. Screws are not recommended. Be sure that the mounting pads are fully flush with the front edge of your workbench. This insures sufficient clearance for the ram.

It is suggested that ample room be available to the left of the press. This will be your work area and a handy place for your bullets. Only a small area need be kept available to the right of the press for empty cases and loaded rounds.

Case Catcher

As the shell plate is rotated, at the bottom of the stroke, the loaded round is ejected down the chute to the right. The loaded round catcher is held by a special bracket which must be attached to your bench with the screws provided. The left end of the bracket should be parallel with the Load-Master right mounting lug.

Case Inserter

Cases are slid close to the shell plate on the downstroke of the ram and pushed into the shell plate as the ram starts upward. This unique action is achieved with a crank connected to an angled slide with the crank slider. The feed bracket can be easily adjusted in or out as required to fully insert the case. Once set, usually no further adjustment is needed unless you change from a very large case to an extremely small case.

The following is best performed without primers and the turret not installed.

Insert the round end of the ¼ square shaft into the feed bracket, making sure that it is turned with a flat side square to the press. The crank wire should enter the end hole of the case slider. Tighten the set screw. **Tighten the top screw of the crank slider; use bottom screw to adjust force of shell insertion.**

Cycle press to assure free motion. At the upper most ram travel, place a case in front of the shell slider, cycle lever, again place case in front of slider, cycle lever. If the case collides with the case in shell plate, remove feed rod and unscrew feed bracket one or more full turns. When tightening feed bracket, be sure to allow ⅛" clearance between carrier tongue and square rod—about the thickness of a pencil.

Installing the Lee Pro Auto-Disk Powder Measure

Place the pendant about five beads from the end of the chain. Some chain should dangle below the pendant as the weight helps the chain slide through the carrier hole on each cycle.

Place the buffer spring on top of the pendant. Lace the chain from the bottom of the attach plate to the Pro Auto-Disk Powder Measure.

With the carrier in the down position, thread the chain through the outer most hole in the Pro Auto-Disk actuator lever. Raise the ram slightly and pass one full bead through the hole. At this point the chain should be taut between the carrier and the actuator lever. Pass the remaining chain through the inner most hole and pull it tight.

Fine adjustment is easiest done where the chain attaches to the powder measure. The chain passes through two holes in the lever and it will never move, yet it is easily adjusted.

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Installing the Lee Auto-Drum Powder Measure

See product instructions for setup.

Verify Powder Dispensed

It is always important to check the setting of any adjustable powder measure. Insert case into shell plate, verify hopper is turned on by turning counterclockwise, raise the ram and dispense a charge.

Remove charged case, empty charge on to scale pan to determine the weight. Make adjustments to measure if it is light or heavy, see powder measure instructions for adjustment.

Preliminary Testing

When you operate the lever you must make complete strokes, stop to stop. Failure to complete the up stroke (lever down) can cause index flipper to put in a “half-cocked” position at mid-stroke and cause press to bind. Continued pressure may damage the indexer rod flipper. If for whatever reason you short bind. Continued pressure may damage the indexer out manually to the edge of the frame.

Near the bottom of the stroke the lever will push against the indexer and smoothly rotate the shell plate exactly 72°.

Always move the ram fully to the stops at both ends of the stroke. Be gentle at the stops. Repeatedly slamming the lever hard against the stops will break something. You have full control of the speed of ram travel and index. While you can go as fast as you like and the machine will not malfunction, going too fast will cause the powder to fling out of your cases while indexing and not permit you to feel when things go wrong. For this reason, we strongly suggest a slow to moderate lever speed. Highest production is achieved with fast lever travel during the mid stroke and learn to slow your travel at both ends of the stroke. Remember that large charges of rifle powder need time to flow, so you must pause sufficiently for all of the powder to enter the case.

One Last Step! Very Important!

At 4 of the 5 loading stations the cases are held in the shell plate with case retainers. The retainers are made to swing out so you can easily remove a case from any position. They must be set so that they hold the case fully into the shell plate. If you push them in too far the case will correctly position them as it passes.

Place a single case in the shell holder and set the case retainers against the case rim in all four stations. The case retainers precisely position the case so that it will be centered to enter the dies and most important to center over the new primer in the second station.

CAUTION Some .45 brass now use SMALL pistol primers

Primer Explosion Deflector must be installed if using brands of primers other than CCI or Remington.

Install Primer Explosion Deflector

The explosion deflector mounts to the upper right-hand side of the Load Master frame.

Two holes cast into the frame, into which the two screws provided will self tap. Remember, the LoadMaster primes on the up stroke of the carrier, so the deflector should be between you and the primer tray when the carrier is all the way up.

Filling the Primer Feeder

Slide the flow control to open. Unfold tray and place on top of box of 100 Remington or CCI brand primers. Only Remington or CCI brand primers are safe to use unless you have installed the explosion deflector. Do not use Federal or any brand of primers other than CCI or Remington without the explosion deflector in place. Flip tray over to deposit primers.

Shake the tray side to side to upright primers. Fold cover and slide the flow control to LOCK. Attach the tray to the trough. Slide the flow control to ON. Tap the side of the tray several times to fill the trough. The trough will remain filled due to the agitator bumps on the frame. A primer won’t feed unless a case is present to push the primer lever back.

Set Primer Depth Adjustment

The ¼-20 screw that bears against the priming rocker arm may require some fine adjusting to seat primers to your liking. Make very small adjustments and test after each. There is sufficient spring in the linkage to accommodate slight differences in cases.

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Operation
Always move the lever fully to the positive stops at both end of lever travel.

Be gentle when you come to the stops to avoid damage. Cases are not perfect and rims may be damaged. It is important to always watch to see that the case fully enters the shell plate.

Always keep the primer trough full with CCI or Remington brand primers. No other brand is safe to use without the explosion deflector installed.

After the fourth stroke of the lever the sized, primed and charged case should be in a position to start the bullet into the case mouth or rest it on the case mouth if you are loading rifle cases.

That's all there is to it. The Lee Load-Master is the nicest press you'll ever use.

WARNING
The greatest danger in reloading is the double charge. Should you be interrupted while reloading or should anything go wrong, go way out of your way to be positive that no round has received a double charge.

Cases can be easily removed from every station by swinging out the case retainer.

Case Feeder
The Lee 4 Tube Magazine Case Feeder and collator are highly desirable options for pistol cases. Attach the cylinder and plate as shown. This assembly should be slightly more than one case length above the carrier tongue. A close adjustment of the height will keep cases from tipping. However, it should not be so close that slight case length variances will cause binding. Tighten the lock nuts. Use two 7/16 wrenches to prevent breaking the bracket.

Lubrication
The press has been lubricated at the factory. After several thousand rounds of loading, or if the press has set idle for a long time it should be relubricated. Use any automotive type grease in the 3 fittings at the ends of the pins. Grease guns are available in automotive departments of all chain stores for less than ten dollars. Place a small dab of grease on the primer rocker arm where it contacts the bolt head. The ram should be oiled before every use and it will last forever.

Automotive engine oil is the best. Any kind of oil is better than none. DO NOT USE WD-40 or dry lubricants. These do not offer sufficient protection.

A very tiny amount of grease in the center hole of the shell plate and the square indexer rod will greatly extend the life of the carrier and make it work smooth as silk.

Changing The Turret
Changing calibers is quick and easy because of the removable turret. It is precisely aligned with the knurled lock screw on the left. Loosen the screw so the turret can be rotated about 3/8” and lifted out. When replacing, make certain the lock screw engages the groove in the turret.

Changing Calibers
The fastest way to change dies is to have them installed in their own turret. It then becomes very fast and easy to replace the entire turret.

If the shell head is of a different size it is also necessary to replace the shell plate. The shell plates for the Load-Master are the easiest of all to change.

While the shell plate is off, you can change the primer feeder if another size is needed. Remember to change to the proper type of primers — rifle, pistol, regular or magnum.

Changing The Priming Tool
Remove the knurled nut, case ejector, indexer rod and shell plate. Swing the case retainer out of the way. Insert the primer punch into the hexagon-shaped hole in the right rear of the carrier. Be sure the tiny
NOTE BEVEL

This is typically used to seat the bullet. On pistol cases where the mouth has been flared, the bullet can be started into the case mouth by hand or can be automatically placed with the optional Lee Bullet Feeder. The die should be adjusted to seat the bullet at the proper depth. Proper depth is achieved when:

a) Cartridge overall length is short enough to function through your gun’s action.

b) The bullet’s crimp groove is almost entirely inside the case mouth.

NOTE This is not important if a Lee Factory Crimp Die is to be used at the next station.

c) The bullet is not seated deeper than recommended by the charge table.

Changing The Shell Plate

Remove knurled nut case ejector and indexer. Select proper shell plate from chart on the last page. Replace shell plate on carrier you will have to work it under the primer lever.

Place case ejector directly on top of the shell plate making sure square on top of center post is engaged and case ejector pointer is towards the chute on the right.

Secure case ejector and shell plate with knurled nut. Be sure “O” ring and groove is toward shell plate. Install indexer with longer portion of flipper pointing upward and beveled side of indexer to your right.

Wedge locking of the shell plate is adjusted by screwing the flipper out for a tighter lock, screw in for a looser lock. Smoothest operation is attained with the wedge lock slightly loose.

Specific Station Requirements

Station 1

This is the only station for depriming.

Station 2

This station may not be used to add powder or deprime. A pistol expanding die can be used at this station if it does not deprime or add to the powder.

HINT A carbide sizing die with the decapper removed can be placed at this station. This will provide excellent alignment of the case for priming. Be sure to install a Lee Universal Decapping Die in station #1 or use a larger caliber die to deprime.

Station 3

This is the powder charging station. It is strongly recommended that an automatic powder measure be used at this station.

Station 4

This is typically used to seat the bullet.
Alignment of the Carrier to the Turret

This is an adjustment that need never be done unless you disassemble the carrier from the ram.

The draw bolt head, at the bottom of the ram, MUST be loosened so the carrier can be rotated on the end of the ram. With the index flipper in the “in position” and the carrier at the pull out rib position, swing the carrier clockwise (viewed from top) until center hub of index flipper contacts the pull-out rib. [FIGURE 4]. Tighten draw bolt securely — 11.6 ft./lbs.

## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primers not fully seated</td>
<td>Lever not lowered to full down stop</td>
<td>Actuate lever to FULL DOWN position</td>
</tr>
<tr>
<td></td>
<td>Die set too deeply to press</td>
<td>Adjust dies to insure carrier can travel to FULL UP position</td>
</tr>
<tr>
<td></td>
<td>Primer rocker arm bolt not properly adjusted</td>
<td>See adjustment procedure in this manual</td>
</tr>
<tr>
<td>Tipped primer</td>
<td>Case retainer out of adjustment</td>
<td>See adjustment procedure in this manual</td>
</tr>
<tr>
<td></td>
<td>Cases not aligned well due to out of tolerance or damaged rim</td>
<td>Install sizing die without decapper in priming station for better alignment. See Changing Dies, Station #2.</td>
</tr>
<tr>
<td></td>
<td>Dirt or gun powder in shell holder grooves</td>
<td>Scrape shell holder grooves with paper clip. Use compressed air to remove debris.</td>
</tr>
<tr>
<td></td>
<td>Tumbling media on primer post or in primer feed</td>
<td>Remove and clean primer feed. Do not process cases with tumbling media lodged in primer flash hole.</td>
</tr>
<tr>
<td>Primer does not feed onto primer punch</td>
<td>Oil in trough</td>
<td>Clean oil from trough</td>
</tr>
<tr>
<td></td>
<td>Primer trough not full</td>
<td>Keep primer trough full</td>
</tr>
<tr>
<td>Shell plate fails to index</td>
<td>Damaged case ejector paw</td>
<td>Straighten paw to prevent excessive clockwise movement of shell plate</td>
</tr>
<tr>
<td></td>
<td>Carrier out of adjustment</td>
<td>See adjustment procedure in this manual</td>
</tr>
<tr>
<td></td>
<td>Indexer improperly installed</td>
<td>See adjustment procedure in this manual</td>
</tr>
</tbody>
</table>
List of Sizes

<table>
<thead>
<tr>
<th>CARTRIDGE PISTOL</th>
<th>SHELL PLATE</th>
<th>PRIMER SIZE</th>
<th>CASE FEEDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Rem. Jet</td>
<td>1S</td>
<td>S</td>
<td>90658</td>
</tr>
<tr>
<td>256 Win. Mag.</td>
<td>1S</td>
<td>S</td>
<td>90658</td>
</tr>
<tr>
<td>30 Lug.</td>
<td>19S</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>30 Mauser</td>
<td>19S</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>32 ACP</td>
<td>7</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>32 Short Colt</td>
<td>4A</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>32 Long Colt</td>
<td>4A</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>32 &amp; W</td>
<td>4A</td>
<td>S</td>
<td>90659</td>
</tr>
<tr>
<td>32 &amp; W Long</td>
<td>4A</td>
<td>S</td>
<td>90559 w/Large Slider</td>
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<tr>
<td>32 H&amp;R Mag.</td>
<td>4A</td>
<td>S</td>
<td>90559 w/Large Slider</td>
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<tr>
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<td>S</td>
<td>90659</td>
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<tr>
<td>32 ACP</td>
<td>19S</td>
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<td>1S</td>
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<tr>
<td>30 Special</td>
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<tr>
<td>357 Magnum</td>
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<td>90658</td>
</tr>
<tr>
<td>40 &amp; S</td>
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<td>S</td>
<td>90658 w/Small Slider</td>
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<tr>
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<td>L</td>
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<td>L</td>
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<td>L</td>
<td>90658</td>
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<tr>
<td>44 &amp; S&amp;W SPL</td>
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<td>L</td>
<td>90658</td>
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<tr>
<td>44 &amp; S&amp;W Russian</td>
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<td>L</td>
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<tr>
<td>44 Magnum</td>
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<tr>
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Lee Bullet Feeder
Fits directly into the Load-Master. Automatically feeds bullets into the mouth of the seating die. Aligns bullets more accurately than possible by hand. Increases the cyclic rate 50 to 100%.

Most of the above sizes can be made up at the factory if the dies are listed in our catalog. Not all dies listed above are available. Most pistol calibers come with the Pro Auto-Disk powder measure and a case feeder. Carbide dies when available. Most rifle calibers come with the Perfect Powder Measure and Universal Charging Die. No case feeder.

* May not work with all cases