

# LT300 with AutoCUT Trigger Setup Instructions

## Safety Warnings:

This device has been designed to eliminate the potential for injuries provided it is assembled and operated properly.

1. **DO NOT** connect the unit to the air supply or attempt to operate it unless all covers are firmly secured.
2. **STAY CLEAR** of the cutter opening **when connecting** the unit to the air supply. Due to the design of the pneumatic circuit, **the cutter will operate one time** when first connected.
3. **DISCONNECT** the unit from the air supply **before servicing** or attempting to clear jams. When connected to the air supply, the cutter is **"ARMED AND READY" TO CUT**.

## Assembly

The numbers in ( ) refer to parts shown in the exploded view drawing

### Tools Required:

- ✖ 7/64" Allen wrench
- ✖ 9/64" Allen wrench (T-handle preferred)
- ✖ 5/16" open end or box wrench
- ✖ 7/16" open end wrench
- ✖ 1/2" open end wrench
- ✖ 7/8" open end wrench
- ✖ 1/4" straight blade screwdriver

**Note:** The LT300A can be assembled in one of 3 possible configurations as shown in Figures 1, 2, and 3. Figures 1 and 2 show the Cutter Housing oriented horizontally; with the cut opening parallel to the work surface. Figure 3 shows the Cutter Housing oriented vertically; with the cut opening facing upward. This mode requires the use of the Vertical Mount Kit (20) to support the Cutter Housing, which must overhang the right hand edge of the work surface.

**Refer to the appropriate assembly instructions, Horizontal or Vertical, which best suit your application.**

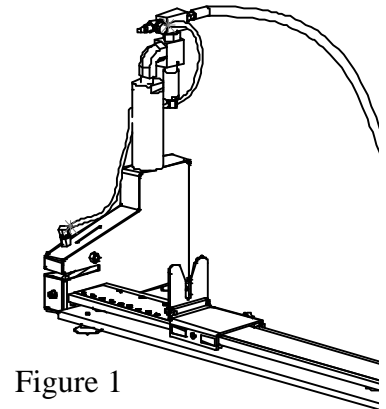


Figure 1

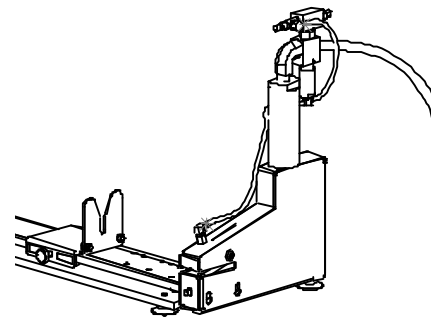


Figure 2

## Horizontal Orientation: (Figures 1 & 2)

1. Assemble the Cutter Housing to the Rail Assembly. The Rail Assembly can be mounted on either side of the Housing for Right or Left-hand preference. Align the two #8-32 screws (9) on the Rail Assembly (1) with the keyhole slots on the Cutter Housing, and insert the screw heads into the slots. Lower the Housing onto the screws and tighten them using the 9/64" Allen wrench inserted through the keyholes on the opposite side of the Cutter Housing. The bottom of the Cutter Housing should be flush with the bottom of the Rail Assembly.

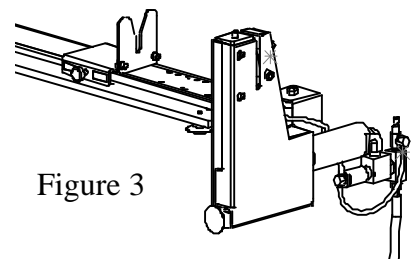


Figure 3

# Caveman Design, Inc

(888) 876-2283

*Dist Simple — Rock Solid*

[www.caveman3.com](http://www.caveman3.com)

# LT300 with AutoCUT Trigger Setup Instructions

## Horizontal Orientation:

2. Assemble the Valve and Hose Assembly (18A, 22, and 23) to the Cutter Housing by threading the 1/8" NPT Male Elbow into the top of the Air Cylinder (5) and tightening with the 1/2" open-end wrench. Support the Air Cylinder with the 7/8" open-end wrench while tightening the Valve Assembly. Final position of the Valve Assembly should be similar to those shown in Figures 1 and 2.
3. Connect the sensor tubing to the Trigger Valve (21) and tighten with the 1/4" straight blade screwdriver.
4. Assemble the Wire Guide (14) to the Slide (11) using the two #6-32 x 1/4" screws (16) and lock washers (15). Tighten with the 7/64" Allen wrench.
5. Mount the Slide Assembly on the Top Plate of the Rail Assembly with the Wire Guide toward the Cutter Housing and insert the Thumbscrew (12) into either side of the Slide to secure.
6. Add a quick-disconnect fitting (not supplied) to the free end of the hose for easy set-up, moving, and safety when servicing.

**DO NOT use a quick-disconnect fitting with integral shut-off valve since it may store energy, which could cause inadvertent operation.**

7. Proceed to the "OPERATION" section.

## Vertical Orientation: (Figure3)

**Note: This orientation requires the optional Vertical Mounting Kit P/N 1057**

1. Remove the Cutter Housing Cover (3) from the Housing (4) by removing the Cutter Retaining Screw and Nut (7) and the 3 #6-32 screws and lockwashers (8 and 15).
2. Carefully remove the Cutter (6) from the Housing (4) and set them aside.
3. Remove the 2 #8-32 Screws (9) from the end of the Rail Assembly (1). Insert these screws through the corresponding holes in the Cutter Housing (4) and tighten into the holes of the Rail Assembly from which they were just removed.
4. Install the Vertical Support Stabilizer (20) using the #6-32 x 3/8" socket head cap screws and lockwashers that are pre-assembled in the Cutter Housing (4). The rubber Foot on the Support should be aligned with the 4 Feet on the bottom of the Rail Assembly (1).
5. Re-install the Cutter (6) into the Housing (4).
6. Re-install the Cutter Housing Cover (3) using the hardware removed in step 1.
7. Assemble the Valve and Hose Assembly (18A, 22, and 23) to the Cutter Housing by threading the 1/8" NPT Male Elbow on the Valve Assembly (23) into the top of the Air Cylinder (5) and tightening with the 1/2" open-end wrench. Support the Air Cylinder with the 7/8" open-end wrench while tightening the Valve Assembly.
8. Connect the Sensor Tubing (22) to the Trigger Valve (21) and tighten with the 1/4" straight blade screwdriver.
9. Assemble the Wire Guide (14) to the Slide (11) using the two #6-32 x 1/4" screws (16) and lock washers (15). Tighten with the 7/64" Allen wrench.
10. Mount the Slide Assembly on the Top Plate of the Rail Assembly with the Wire Guide toward the Cutter Housing and insert the Thumbscrew (12) into either side of the Slide to secure.
11. Add a quick-disconnect fitting (not supplied) to the free end of the hose for easy set-up, moving, and safety when servicing. **DO NOT use a quick-disconnect fitting with integral shut-off valve since it may store energy, which could cause inadvertent operation.**
12. Proceed to the "OPERATION" section.

# Caveman Design, Inc

(302) 234-9969

*Dirt Simple — Rock Solid*

www.caveman3.com

# LT300 with AutoCUT Trigger Operation / Cutter Replacement

## Operation

1. Turn the adjustable needle valve clockwise to close and then open "1/4 turn" counter-clockwise.
2. Connect the LT300 Cutter to a source of clean, dry, regulated compressed air. Pressure should be between 40 and 100 PSI.

**WARNING: The Cutter will cycle once when first connected to the air supply or whenever re-energized after being disconnected.**

3. Test the air pressure and valve setting for the size and type of wire to be cut using a scrap piece of wire. If the cutter doesn't cut completely or jams on the wire, first disconnect from the air supply to open the cutter jaws. Increase air pressure 10 or more psi and retry.
  - ◆ If the cutter moves slowly, i.e. takes a long time to open for the next cut, open the needle valve another 1/8 turn (counterclockwise) and retry. Depending upon air pressure, the needle valve setting should fall between 1/8 and 1 full turn open.
  - ◆ If the cutter does not actuate at all when a wire trips the switch, and the sound of air leaking from the switch can be heard, close the valve fully clockwise, re-open 1/8 to 1/4 turn and retry.
4. Adjust the position of the Slide Assembly for the cut length desired and tighten the Thumbscrew. Cut length is read from the **front** face of the Wire Guide (the side facing the Cutter Housing) even though the device to be cut contacts the **back** face of the Wire Guide. In other words, the scale position has been adjusted to compensate for the thickness of the Wire Guide.
5. Confirm cut length using a scrap piece of wire and readjust the Slide Assembly as needed. Also, recheck cut length periodically since the slide can loosen and move due to repeated impact.

## Cutter Replacement

1. **DISCONNECT** the LT300 Cutter from the compressed air supply. When connected to the air supply, the cutter is "**ARMED AND READY**" TO CUT whenever the Trigger Valve/Whisker Switch (21) is deflected.
2. Use a scrap piece of wire to test the Cutter to insure it is safe to proceed with Cutter replacement.
3. Remove the Cutter Housing Cover (3) from the Housing (4) by removing the Cutter Retaining Screw and Nut (7) and the 3 #6-32 screws and lockwashers (8 and 15).
4. Carefully remove the user Cutter (6) from the Housing (4) and discard.
5. Install the new Cutter (6) into the Housing (4). The recommended order for ease of Cutter installation is;
  - A. Insert lower handle of the Cutter into the rectangular hole just above the foot.
  - B. Insert the Cutter Retaining Screw (7) through the upper hole in the Cutter Jaw.
  - C. Insert the upper handle of the Cutter into the slot on the Yoke. It may be necessary to force the Yoke down slightly to enable the Cutter handle to fit into the slot.
6. Re-install the Cutter Housing Cover (3) using the hardware removed in step 1.
7. Reconnect the LT300 Cutter to the compressed air supply. Pressure should be between 40 and 100 PSI.

**WARNING: The Cutter will cycle once when first connected to the air supply or whenever re-energized after being disconnected.**

# Caveman Design, Inc

(888) 876-2283

*Dist Simple — Rock Solid*

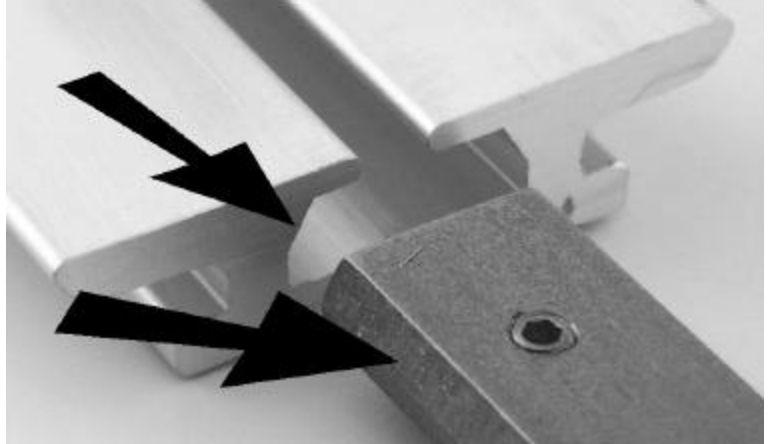
www.caveman3.com

## Modular Rail Assembly Instructions

The Modular Rail System is designed to assemble in **one orientation only**, to minimize alignment errors. The Rail Lock should be installed in the bottom of each extrusion and all four setscrews are snugged to prevent movement. The Rail and Rail Lock sections have mating chamfers that aid in proper alignment.

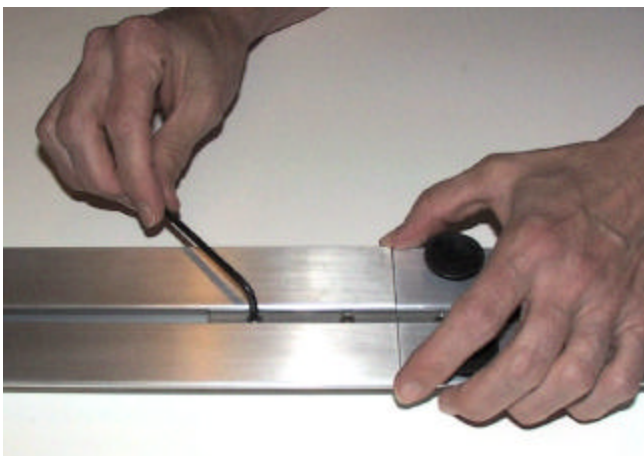
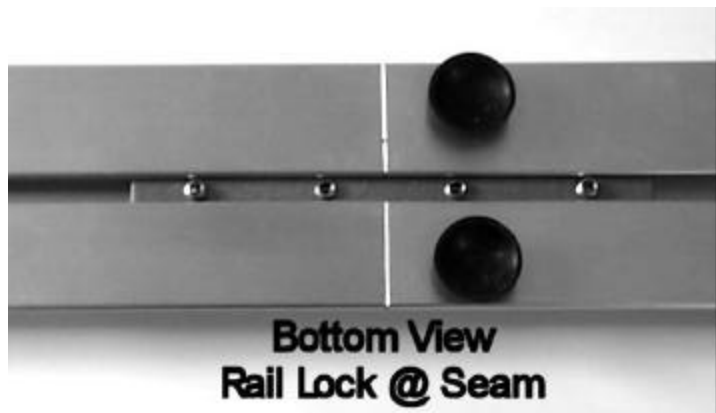
### Tools Required

- 1/8" allen wrench
- Soft flat surface



### Procedure

1. Locate two adjacent Rail sections by looking at the scale label numbers.
2. Place the two sections face down on a smooth flat non-abrasive surface.
3. Locate the Rail Lock and loosen the four setscrews until the lock will move freely.
4. Move the Rail Lock until it is centered on both rails.
5. Snug both setscrews on the left rail section.
6. Push the two rails together until they are in contact and aligned.



7. Press down on the seam as shown and snug the right two setscrews. The scale should move into alignment as the screws are snugged. You may need to align the two edges with your fingers while tightening the first screw.

**Note: Steps 5 – 7 were based on a right-handed person. The**

# **Caveman Design, Inc**

(888) 876-2283

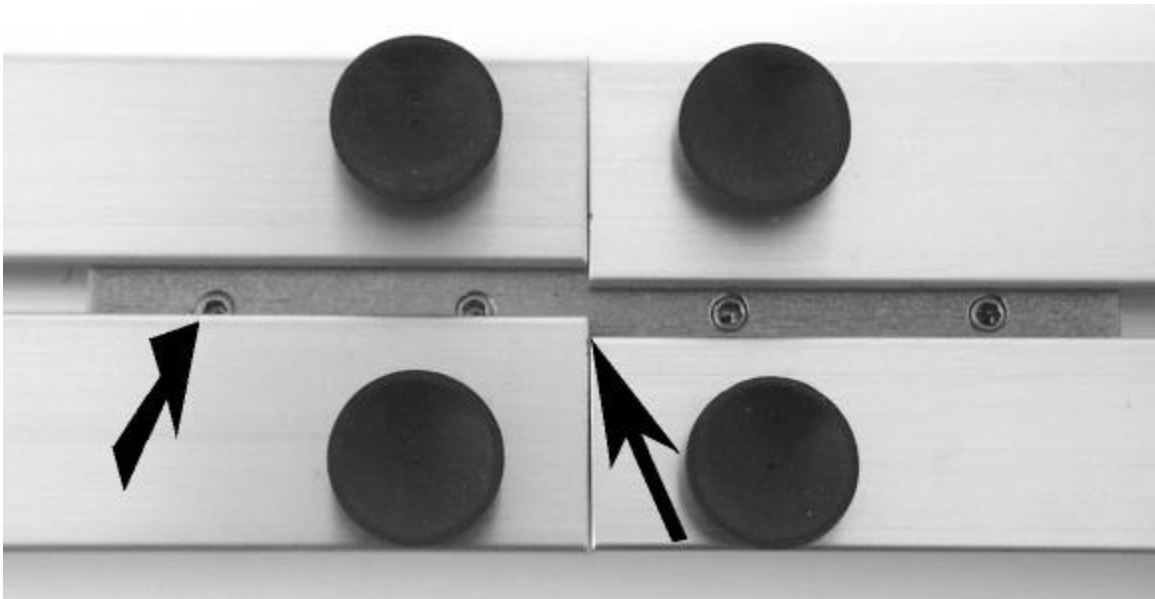
Dirt Simple — Rock Solid

[www.caveman3.com](http://www.caveman3.com)

**procedure works just as well starting with the right rail section in Step 5**

8. Repeat steps 1 – 7 for additional rail sections.
9. Turn Rail system over and install the Slide Assembly. Move the Slide over the intersections to insure smooth transition between sections. If it catches at the seam, adjust the positioning by loosening and repeating step 7.

**Caution: This system is designed to assemble only one way. The following picture shows improper assembly. The arrows highlight the areas that indicate misalignment. The right side rail is installed correctly.**





16	1015	Screw, 6-32 x .25	N/A	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLE +/- .164 .XX +/- .001 +/- 1° .XXX +/- .005 MATERIAL FINISH	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE APPROVALS DRAWN Tom Long 8/3/98 DEV ENG MFG ENG IGES FILE	Caveman Design, Inc LT300A Parts Breakdown SIZE DWG. NO. REV C 1000-B 1 SCALED XDF FILE: SHEET 1
18A	1068	Hose Assy, 6 ft				
19	1039	Slide Assy	Includes 2 straight fittings			
20	1057	Vertical Mount Kit	Includes 11-16			
21	1054	Switch, whisker	Includes foot and 2 mtg screws			
22	1062	Tubing Assy				
23	1063	Automatic Valve Assy				

#	Part No.	Description	Replacement Parts
1	1067	Rail Assembly, 24"	
1	1049	Rail Assembly, 48"	
1	1050	Rail Assembly, 72"	
2	1036	Foot	Set of 5
3	1001	Cover	N/A
4	1002	Housing	N/A
5	1032	Air Cylinder Assy	Includes yoke
6	1035	Cutter	3 Cutters, 1 Retaining Screw
7	1028	Screw, 6-32 x 1.3	Included in 1035 above
7A	1021	Nut, #6 Nylock	Included in 1035 above
8	1048	Screw, 6-32x.38	N/A
9	1010	Screw, 8-32x.38 nylock	N/A
10	1016	Scale, 24"	
10	1043	Scale 72"	Use for 48" or 72" models
11	1003	Slide	Included in 1039
12	1037	Thumbscrew	
13	1038	Slide Insert	Set of 4
14	1004	Wire Guide	
15	1029	Lockwasher, #6	N/A
16	1015	Screw, 6-32x.25	N/A
18A	1068	Hose Assy, 6 ft	Includes 2 straight fittings
19	1039	Slide Assy	Includes 11-16
20	1057	Vertical Mount Kit	Includes foot and 2 mtg screws
21	1054	Switch, whisker	
22	1062	Tubing Assy	
23	1063	Automatic Valve Assy	