



# **ASTRO UW-1C and RW-1C LABEL PRINTER UNWINDER & WINDER**



## **OPERATOR MANUAL**

Powered by  
**memjet**®

**ASTRO MACHINE CORP.**

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## SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. HOWEVER, CERTAIN SAFETY RULES SHOULD BE OBSERVED WHEN OPERATING THE UW-1C AND RW-1C LABEL UNWINDER AND REWINDER.

BEFORE USING THESE UNITS, YOU SHOULD READ THIS MANUAL CAREFULLY AND FOLLOW THE RECOMMENDED PROCEDURES, SAFETY WARNINGS, AND INSTRUCTIONS:

- ✓ Keep hands, hair, and clothing clear of rollers and other moving parts.
- ✓ Avoid touching moving parts or materials while the machine is in use. Before clearing a jam, be sure machine mechanisms come to a stop.
- ✓ Always turn off the machine before making adjustments, cleaning the machine, or performing any maintenance covered in this manual.
- ✓ Power cord and power supply supplied with the machine should be plugged into a properly grounded, easily accessible wall outlet located near the machine. Failure to properly ground the machine can result in severe personal injury and/or fire.
- ✓ Power cord and wall plug are the primary means of disconnecting the machine from the power supply.
- ✓ DO NOT use an adapter plug on the line cord or wall outlet.
- ✓ DO NOT remove the ground pin from the line cord.
- ✓ DO NOT route the power cord over sharp edges or trap it between furniture.
- ✓ Avoid using wall outlets that are controlled by wall switches or shared with other equipment.
- ✓ Make sure there is no strain on the power cord caused by jamming between equipment, walls or furniture.
- ✓ DO NOT remove covers. Covers enclose hazardous parts that should only be accessed by a qualified service representative. Report any cover damage to your service representative.
- ✓ This machine requires periodic maintenance. Contact your authorized service representative for required service schedules.
- ✓ To prevent overheating, do not cover the vent openings.
- ✓ Use this equipment only for its intended purpose.

In addition, follow any specific occupational safety and health standards for your workplace or area.

This manual is intended solely for the use and information of Astro Machine Corp., its designated agents, customers, and their employees. The information in this guide was obtained from several different sources that are deemed reliable by all industry standards. To the best of our knowledge, that information is accurate in all respects. However, neither Astro Machine Corp. nor any of its agents or employees shall be responsible for any inaccuracies contained herein.

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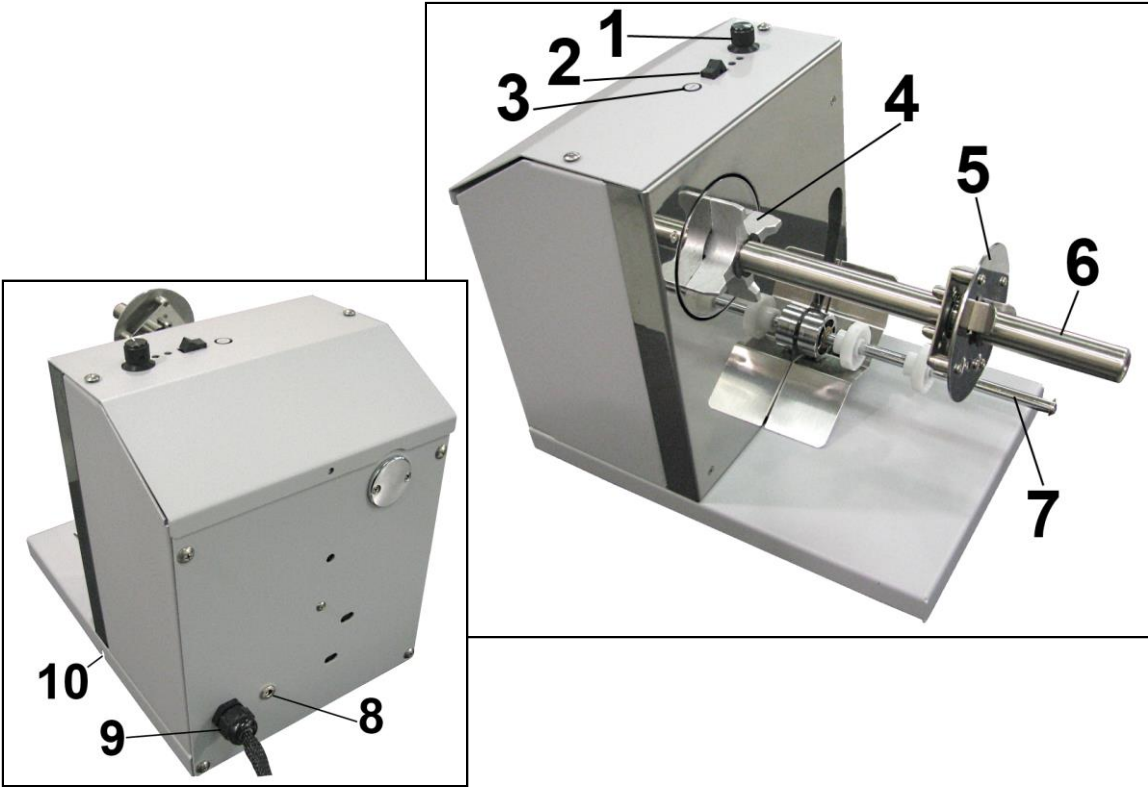
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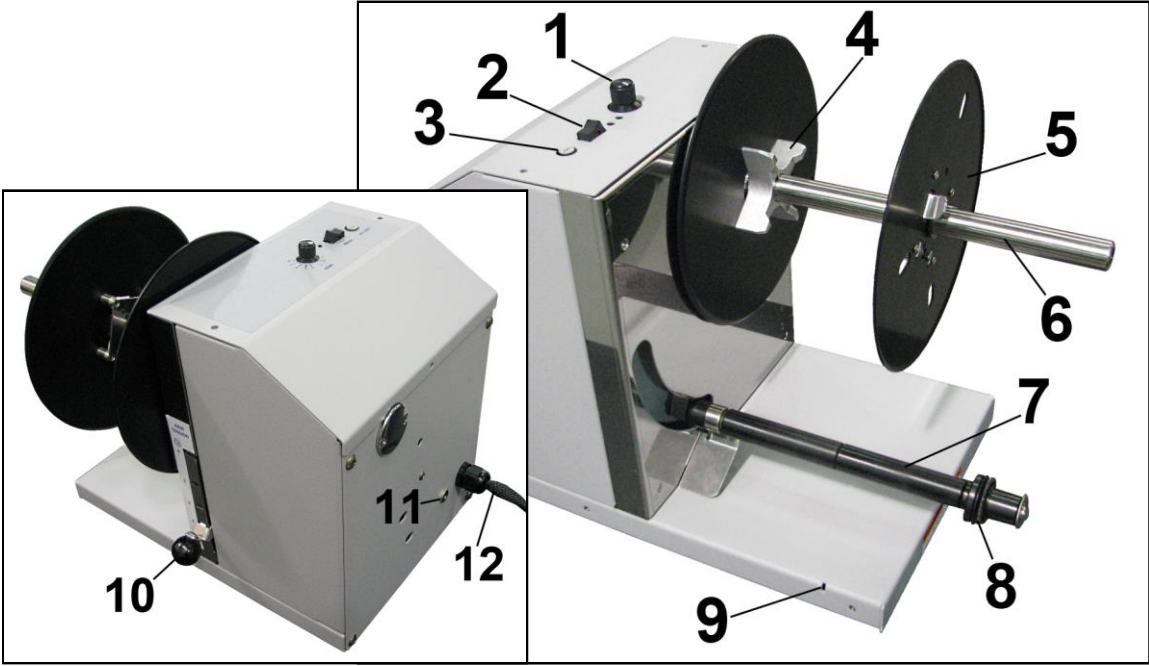
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SECTION 1 – *Getting Acquainted*



**UW-1C Unwinder/Roll Feeder**

1.	<b>Speed Control</b> – Turn clockwise to speed up, counterclockwise to slow down.
2.	<b>AUTO/Manual Mode Switch</b> – Use to set the Unwinder in <b>Automatic</b> or <b>Manual</b> Mode.
3.	<b>Fuse</b> – Unwinder fuse is located here.
4.	<b>Hub Assembly</b> – Reversible to fit 1-1/2" and 3" cores.
5.	<b>Spindle Lock</b> – Holds the roll on the Spindle.
6.	<b>Label Roll Spindle</b> – Holds the Label Roll.
7.	<b>Label Tension Guide Shaft</b> – Spring-loaded shaft controls starting and stopping as tension is maintained or released by media.
8.	<b>24V, 2.5A External Power Connector*</b> – For connecting printers or equipment other than the M1C. <b>NOTE:</b> External power supply must be a UL Listed power supply. *Requires disconnecting wire from Unwinder circuit board and connecting wire from External Power Connector.
9.	<b>Unwinder Interconnect Cord</b> – Connects Unwinder to Printer.
10.	<b>Alignment Notch</b> – Fits over Alignment Screw on Printer to keep Printer and Unwinder aligned.



**RW-1C Winder**

1.	<b>Speed Control</b> – Turn clockwise to speed up, counterclockwise to slow down.
2.	<b>ON/OFF Switch</b> – Use to turn Winder power ON or OFF.
3.	<b>Fuse</b> – Winder fuse is located here.
4.	<b>Hub Assembly/Guide</b> – Fits 3" cores.
5.	<b>Spindle Lock/Guide</b> – Holds the roll in place on the Spindle.
6.	<b>Label Roll Spindle</b> – Used to wind the Printed Labels around an empty core.
7.	<b>Adjustable Media Guide Ring</b> – Slides to fit width of media exiting Printer.
8.	<b>Label Tension Guide Shaft</b> – Spring-loaded shaft controls starting and stopping as tension is maintained or released by media.
9.	<b>Winder Alignment Notch</b> – Aligns with the notch on the Spacer Plate mounted on the Printer. Plate is then attached to Winder to keep the Printer and Winder properly aligned and spaced apart.
10.	<b>Tension Adjuster Control Knob</b> – Increases or decreases spring tension on the Tension Guide Shaft to accommodate different media widths.
11.	<b>24V, 2.5A External Power Connector*</b> – For connecting printers or equipment other than the Label Printer. <b>NOTE:</b> External power supply must be a UL Listed power supply. *Requires disconnecting wire from Winder circuit board and connecting wire from External Power Connector.
12.	<b>Winder Interconnect Cord</b> – Connects Winder to Printer.

***Printer Default Printing Modes***

The M1C Printer has three default Printing Modes “**Roll-to-Roll**”, “**Roll-to-Cut**”, and “**Fanfold**”. What is connected or disconnected from the Printer determines what mode the Printer will operate in and disables or enables the automatic function of the Cutter.

**NOTE: These defaults will override any presets built into the job being run.** Before starting to print a job make sure the Printer, Unwinder and Winder are set up correctly for that particular job.

<b>PRINT MODE</b>	<b>UNWINDER</b>	<b>WINDER</b>	<b>CUTTER</b>
<b>Roll-to-Roll</b>	Powered ON/Connected to Printer	Powered ON/Connected to Printer	Disabled. (Still cuts manually by pressing 'CANCEL' button.)
<b>Roll-to-Cut</b>	Powered ON/Connected to Printer	Powered OFF or Disconnected from Printer	Enabled for automatic cutting
<b>Fanfold</b>	Powered OFF or Disconnected from Printer	Powered OFF or Disconnected from Printer	Enabled for automatic cutting

**See Section 2 – Installation and Operation, “Loading Labels” for how to load Roll and Fanfold Labels**

## SECTION 2 – *Installation and Operation*

### *Contents of Packaging*

1.	UW-1C Unwinder ( <i>Sold separately</i> )
2.	RW-1C Winder ( <i>Sold separately</i> ) Includes Printer/Winder Spacer Plate, 2 shims
3.	Printer Interface cable(s)
4.	Unwinder/Winder Operator Manual

#### **Before using the Unwinder and/or Rewinder the following must be done:**

- Choose a location for the Printer UW-1C Unwinder and RW-1C Winder
- Unpack the Unwinder and/or Rewinder
- Install the Printer/Winder Spacer Plate on the M1C Printer
- Align the Printer with the UW-1C Unwinder and RW-1C Winder
- Connect the UW-1C Unwinder and RW-1C Winder to the Printer
- Load Labels (*Roll or Fanfold*) and Set Up the Feed on the Printer

### ***Choose a Location***

The Printer should be placed on a sturdy level worktable or cabinet at least 9 inches from any walls. The surface should be large enough to accommodate the Printer, and UW-1C Unwinder and RW-1C Winder if used, in a line together. Protect the Printer and optional Unwinder/Winder from excessive heat, dust, and moisture. Avoid placing it in direct sunlight.

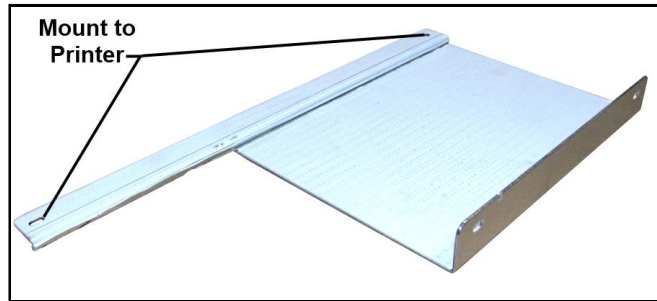
### ***Unpacking and Setup***

Remove the UW-1C Unwinder and/or RW-1C Winder, and all parts from cartons.  
Remove all packing tape.



### *Install MIC Printer/Winder Spacer Plate:*

1. Remove all four Printer feet.  
**NOTE: To prevent ink from spilling or leaking, lift Printer only as high as needed to remove/replace feet. Move Printer to edge of bench or table to remove feet.**



2. Install the long edge of Spacer Plate under the Exit End of the Printer. Reinstall 2 feet to secure Plate to Printer.
3. Install 1 washer/spacer on both of the remaining 2 feet and reinstall on Printer. (*This will keep the Printer level.*) See "Position the Winder" in "Aligning the Unwinder and Winder".

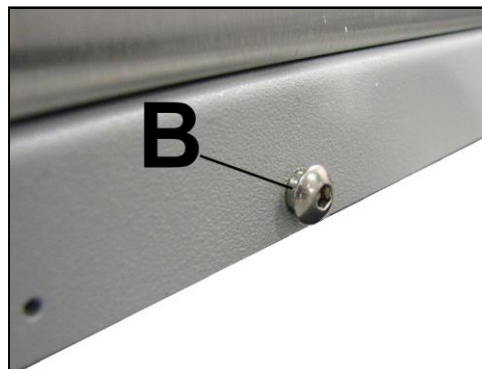
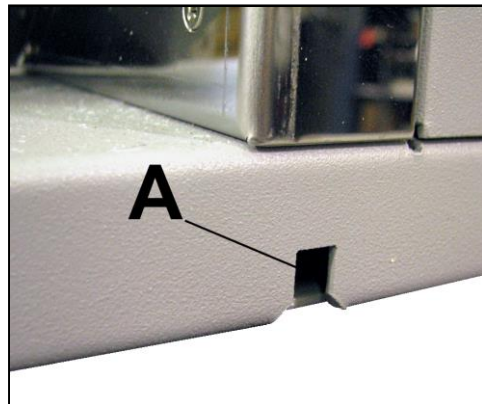
### *Aligning Printer with UW-1C Unwinder and RW-1C Winder*

#### **Roll-to-Roll Label Printing**

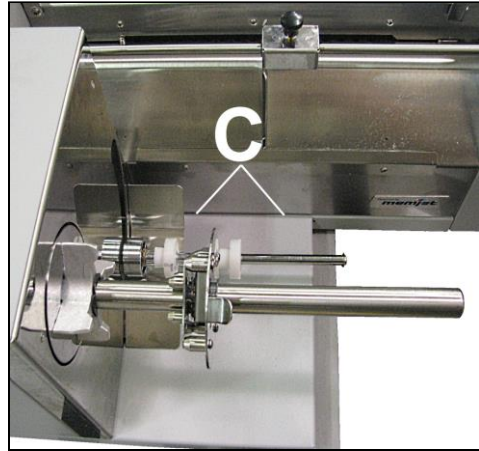
Make sure the Unwinder and Winder are properly connected to the Printer and turned ON, this will disable automatic function of the Cutter. (*Cutter can still be operated manually by pressing the CANCEL button*). Proper alignment of the Unwinder, Printer and Winder is critical to operation of the Label Printer. Position the Printer on a sturdy, stable level work surface with enough room to place the Unwinder and Winder at either end.

#### **Position the Unwinder:**

1. Fit square notch cut into the base of the Unwinder [A] over the pin located along the base of the feed end of the Printer [B].

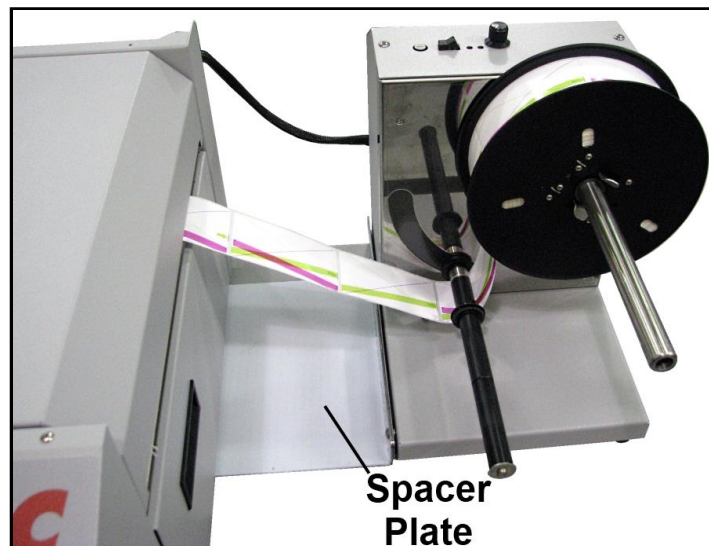
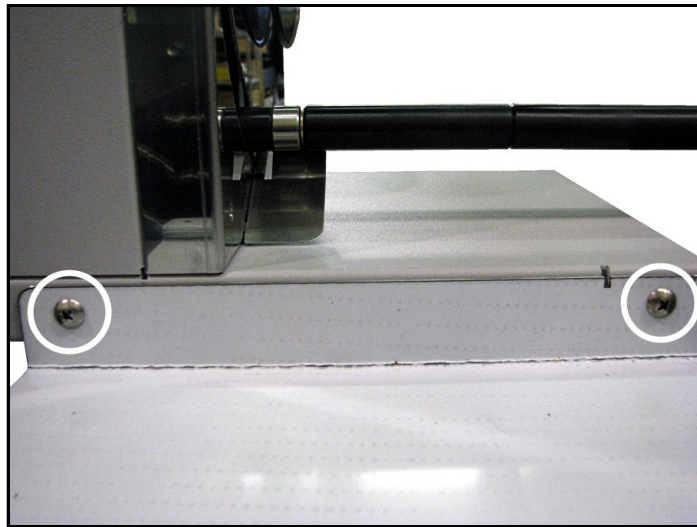
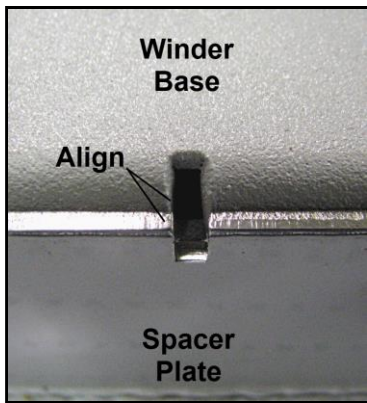


2. Make sure base of Unwinder and base of Label Printer are flush [C].



**Position the Winder:**

1. Align the notch on the Printer Spacer Plate with the corresponding notch on the Winder Base as shown. When aligned, attach Spacer Plate to Winder Base with two screws (included).



2. **Test Alignment.** Run a job. If extreme web drifting is observed or web runs to one side, readjust Winder alignment. Loosen the two Spacer Plate mounting screws. Slide the Winder forward or backward as needed, then tighten the screws.

### Roll-to-Cut Label Printing

Make sure the Unwinder is properly connected to the Printer and turned ON. The Winder should be turned OFF or disconnected to enable automatic operation of the Cutter. Proper alignment of the Unwinder and Printer is critical to operation of the Label Printer. Position the Printer on a sturdy, stable level work surface with enough room to place the Unwinder at the feed end of the Printer.

See “Position the Unwinder” Steps 1-2 above.

### Connecting the Printer to the Optional Unwinder and Winder

**WARNING!**

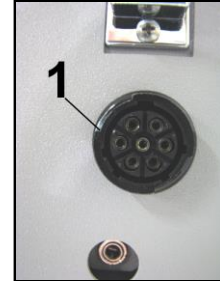
**HAZARDOUS MOVING PARTS!  
KEEP FINGERS AND OTHER BODY PARTS AWAY!**

**CAUTION**

**MAKE SURE THAT THE PRINTER IS TURNED OFF  
BEFORE CONNECTING THE UNWINDER AND WINDER.**

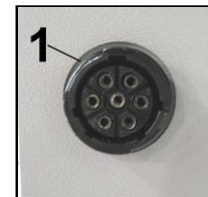
#### Connecting to the UW-1C Unwinder:

Connect one interconnect cable into the 7-pin connector port on the Printer [1] Located just below the USB port.



#### Connecting to the RW-1C Winder:

Connect the other 7-pin interconnect cable into the 7-pin connector port located on the exit end of Printer's non-operator side panel [1].



## Unwinder Mode Switch

The Unwinder has a Mode Switch for “Auto” or “Manual” operation. When used with the M1C, the Unwinder can be left in the “Auto” position.

**Auto** – Unwinder is OFF. Unwinder is controlled by the Printer (*or other external device*) thru the interface cable. Allows easy roll loading since the Unwinder will not start turning when the Drive Press Roller is lifted, only when the Printer is running a job.



**Manual** – Unwinder is always ON. When the Drive Press Roller is balanced (*in the center position of its arc*), the unit is OFF. If tension from the media increases (*Roller raises*), the unit turns clockwise to relieve the tension. If tension from the media decreases (*Roller drops*), the unit turns counterclockwise to increase the tension. This is useful if using the Unwinder with a non-interface external device.

## Loading Labels

### Roll-to-Roll Printing

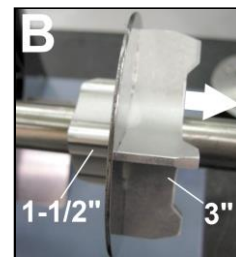
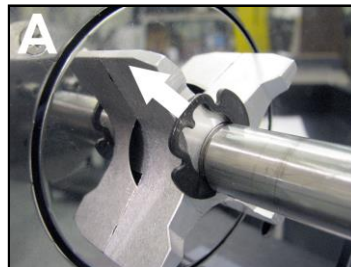
**IMPORTANT!** Make sure the Unwinder and Winder are connected to the Printer. This will ensure that the automatic cut function of the Cutter is disabled. (*Cutter can still be engaged manually by pressing the Cancel button*).

Printer is equipped with one Adjustable Side Media Guide. Make sure the Unwinder is set to “Auto” and Winder (*if used*) is turned OFF and that both are connected to the Printer via the appropriate ports.

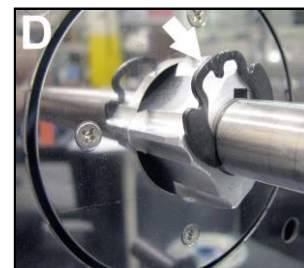
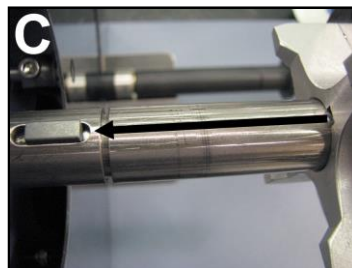
1. **Adjust Core Size (*Unwinder only*):** The Unwinder can fit 1-1/2" or 3" cores using the reversible Hub Assembly.

**To change core sizes, proceed as follows:**

[A] Carefully remove the retaining-clip holding the Hub Assembly in place.



[B] Slide the Hub Assembly off the Shaft. **NOTE: Do not lose the key in the slot in the Shaft.** Each side of the Hub fits a different size core. (*Larger side fits 3" cores; smaller side fits 1-1/2" cores.*)



[C] Turn the Hub so the desired core size is facing out. Slide the Hub Assembly back into place over the key in the Shaft.

[D] Reinstall the retaining-clip into the groove cut in the Shaft.



2. **Load Label Roll:**

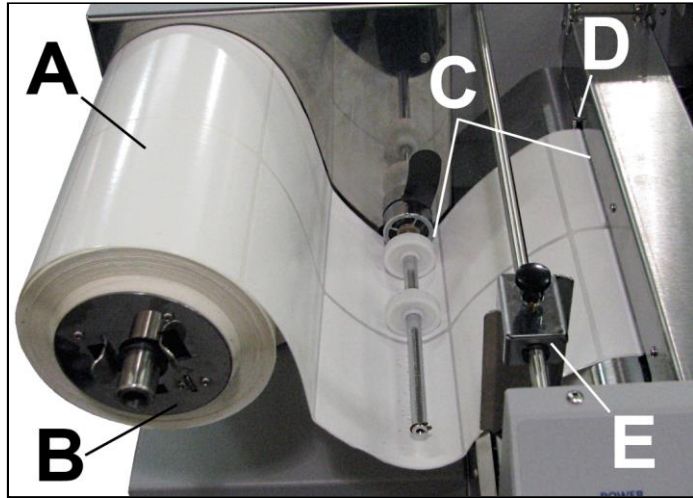
[A] Slide Roll onto Unwinder Shaft, labels facing up with the Roll End facing the Printer.

[B] Slide the Roll Lock onto the Unwinder Shaft until the 4 pins fit into the roll core.

[C] Pull the roll leader under the Drive Press Roller, under the crossbar, raise the Brush Assembly and push leader to entry of Print Engine. Lower the Brush Assembly.

[D] Align the side edge of the roll with the two alignment pins on the Printer and feed the roll end into the Print Engine.

[E] Slide the Adjustable Side Guide until it just touches the labels. Tighten the locking knob on the Adjustable Side Guide.



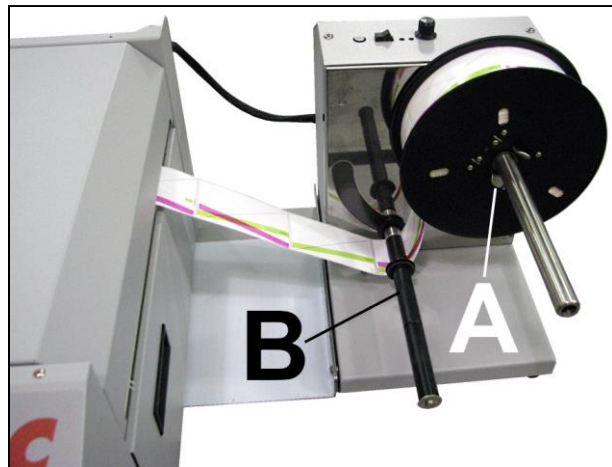
3. Press the Print button momentarily and the Printer will align and pull in the labels. Hold the Print Button down to feed the labels through the Printer until you have enough leader to attach it to the Winder.

4. [A] Load an empty 3" core on the Winder Spindle. Slide the Spindle Lock on the shaft until the 4 pins fit into the roll core.

[B] Take the leader end and pull it end under the Drive Press Roller on the Winder.

[C] Tape or glue the roll end (*label side up*) to the top side of the empty core. **NOTE: Make sure the edge is secured straight on the core for proper winding.**

[D] Slide Adjustable Media Ring Guide on the Drive Press Roller Shaft to the edge of the media.



### Adjusting Speed on UW-1C Unwinder and RW-1C Winder

For proper media feeding and printing, you will have to adjust the speed on the Unwinder and Winder depending on the type of media and job you are running. To speed up the Unwinder and Winder turn the Speed Controls clockwise. To slow the speed, turn the Control counterclockwise.

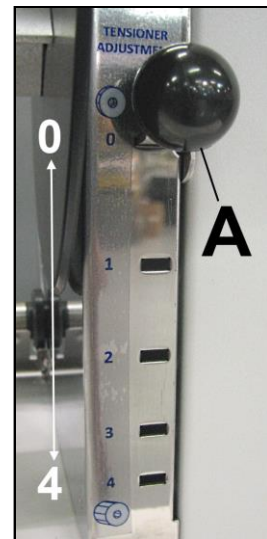


#### CAUTION

**SETTING UNWINDER SPEED TOO HIGH CAN CAUSE THE MEDIA TO HESITATE AS IT UNWINDS AND AFFECT PRINT REGISTRATION.**

### Adjusting Winder Tension

Use the control knob [A] to adjust the spring tension on the Tension Arm for different media widths. Use the “0” setting for narrow media and the “4” setting for the widest media.



### Roll-to-Cut Labels

**IMPORTANT! Winder must be turned OFF or disconnected from the Printer and moved out of the way. This will ensure that the automatic cut function of the Cutter is enabled.**

Load the Label Roll on the Unwinder and Printer using Steps 1-2 in “**Roll-to-Roll Printing**” above. Then press the Print button momentarily so the Printer will align and pull in the labels.

### Printing Fanfold Labels

**IMPORTANT! Make sure both Unwinder and Winder are turned OFF or disconnected from Printer and moved out of the way. This ensures that the automatic cut function is enabled on the M1C.**

## SECTION 3 - *Maintenance*

### *Cleaning*

#### **WARNING!**

**THE UNWINDER AND WINDER ARE PRECISION MACHINES. CLEAN REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE, DISCONNECT THE MACHINE FROM ITS POWER SOURCE!  
DO NOT REMOVE SIDE COVERS! HIGH VOLTAGES PRESENT.**

Clean the Unwinder and Winder regularly to remove accumulated label residue and dust. Depending on the types of media that are run, label residue and dust may accumulate on surfaces.

1. Turn the Unwinder and/or Winder OFF and unplug it from the power receptacle.
2. **Exterior:** Wipe clean with a lint-free cloth using any standard nonabrasive household cleaner that does not contain plastic-harming solvents.

#### **CAUTION**

**NEVER SPRAY OR POUR CLEANERS DIRECTLY ON OR INTO THE UNWINDER OR WINDER. EXCESS LIQUID COULD HARM ELECTRONIC PARTS.  
DAMPEN A LINT-FREE CLOTH WITH THE CLEANER AND APPLY IT TO THE PARTS TO BE CLEANED.**

# APPENDIX – Unwinder/Winder Specifications

<b>UNWINDER/WINDER SPEED</b>	0-125 RPM
<b>MAX. PRINT SIZE</b>	8.5" (215.9 mm) W x Continuous Length
<b>MEDIA TYPES</b>	Roll
<b>MEDIA SIZE</b>	<b>Minimum:</b> 2" W x 2.25" L (50.8 mm x 57 mm) <b>Maximum:</b> 9" (228.6 mm) W x Continuous length
<b>MEDIA THICKNESS</b>	<b>Minimum:</b> 3 points (0.1 mm) <b>Maximum:</b> 12 points (0.3 mm)
<b>ROLL SIZE (3" CORE) (Unwinder/Winder)</b>	<b>Minimum:</b> 2" W x 10" Dia. (50.8 mm x 254 mm) <b>Maximum:</b> 9" W x 10" Dia. (228.6 mm x 254 mm)
<b>ROLL CORE SIZES</b>	<b>UNWINDER Reversible Hub:</b> 1.5" & 3" Dia. (38 mm x 76.2 mm) <b>WINDER Hub:</b> 3" Dia. (76.2 mm)
<b>ELECTRICAL</b>	115 VAC, 50/60 Hz (220-240 VAC, 50/60 Hz available)
<b>DIMENSIONS</b>	<b>UNWINDER/WINDER:</b> 17" L x 9" W x 11" H (43 cm x 22 cm x 27 cm)
<b>WEIGHT</b>	<b>UNWINDER:</b> 17 lbs. (7.7 kg) <b>WINDER:</b> 17.2 lbs. (7.8 kg)

**All Specifications Subject To Change Without Notice**



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