

Unpacking and Setup

- A. Tools needed
 - 1) Razor knife
 - 2) 10mm box wrench or an adjustable wrench
 - 3) Phillips head screwdriver or drill with Phillips head screwdriver bit
 - 4) Straight edge (Yard Stick / Broom Handle/ Level)
- B. Check the overall condition of the crate
 - 1) No holes
 - 2) Not dropped
- C. Check tilt indicator
- D. First, remove lid
- E. Remove contents
 - 1) Platens
 - 2) Boxes of supplies
 - 3) Sprayer

Unpacking and Setup (cont.)

- F. Compare contents to your packing slip
 - 1) Ensure shipment is complete
- G. Remove your M2 from the crate
 - 1) Use at least two people
 - 2) DO NOT Lift from underneath the bed, Lift from lifting points marked on the sides of the machine
 - A. Always lift with you legs
 - B. The machine weighs about 220lbs
 - 3) Place on a VERY STURDY table, one that does not shake
 - A. Shaking can cause registration issues
- H. Remove packing material
 - 1) Remove the tape
 - 2) Remove the screen protector
 - 3) Remove the tape from the belt that is located by the print head

Unpacking and Setup (cont.)

- 4) Remove the accessory bag from the bed
- 5) Remove the tape from the bottom (bed) belt
- 6) With your hand, make sure the bed moves front to back freely
- M. Remove the Red head bracket
 - 1) Remove the two Phillips head screws
 - A. Retain for future use
- O. Release the print head by pressing the release located toward the front, left corner of the print head.
 - 1) Move the print head, by hand, to the other side of the machine, to make sure it moves freely
- P. Make sure waste container is in it's proper place
 - 1) Make sure tube is in the container
- Q. Check all tubing connections

Unpacking and Setup (cont.)

R. Check the contents of the accessory kit (bag that was on the machine)

- 1) USB cable
- 2) Power Cord
- 3) Inventory and check lists
- 4) Phillips screwdriver
- 5) Waste sponges
- 6) Foam brushes
- 7) Syringe
- 8) Ink lower tub kit
- 9) Concentrated cleaning solution
- 10) Microfiber cleaning pads
- 11) Rubber gloves

S. Unpack the platens

- 1) Remove the bubble wrap
- 2) Inspect the platens for damage
- 3) Remove (peel off) the shipping film

[Click here for Unpacking video](#)

Unpacking and Setup (cont.)

A. Level the platens

- 1) You will want the following tools on hand
 - a) A 10 mm box wrench or a crescent (adjustable) wrench
 - b) Some kind of a height gauge – we suggest 3 quarters
 - i. Could be just about anything, such as an Allen wrench, a small piece of tubing, etc.
- 2) Place one platen onto the machine
- 3) Make sure the alignment pins are in the holes of the platens
- 4) Set a stack of 3 quarters onto one of the corners of the platen
 - a) It is easiest to start with one of the back corners.
- 5) Manually release the print head by pressing the release lever
- 6) Bring the print head over, so the rectangular piece of plastic, to the left of the actual print head, is just barely next to the stack of quarters
- 7) Using the “Bed Up/Down” buttons, raise the bed so the quarters are just making contact with, or are just clearing, the rectangular piece of plastic, to the left of the print head
 - a) I personally like it when that piece just touches the top of the stack of quarters.

Unpacking and Setup (cont.)

- 8) Then press the “Bed Up/Down” buttons simultaneously, to turn off the gap sensors
 - a) You do not want the height of the bed to change from this point on
- 9) Now move the stack of quarters to a different corner and check the height.
- 10) If the height is AT ALL different (we are working with tenths of millimeters here), then pull out the platen by hand and adjust the height of that corner, by turning the adjustment nut

Adjustment Nut



- 11) Keep doing that for each corner of each platen, until all of the corners are the same distance away from the print head
- 12) Then return the print head back to the capping station

[Click here for Adjusting Platens video](#)

Anatomy: Control Panel

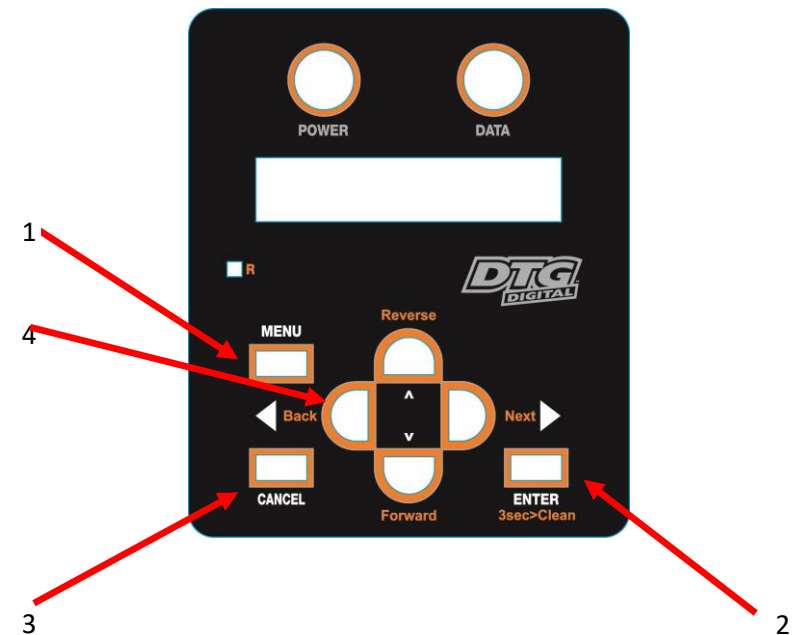
- The operation panel (LCD & Keypad) is used to set operational conditions, display the status of the printer, and set other functions. The names and functions of the operation keys and status lamps are explained below.

NOTE

Some keys have multiple functions and names depending on the printer status (normal or setup menu display).

Anatomy: Control Panel (cont.)

No	Name	Normal Operation Function
1	[Menu] key	Changes the LCD monitor display to setup menu status.
2	[Enter] key	
	[Cleaning] key	If held down for 2 seconds or more, starts cleaning the printer head.
3	[Cancel] key	<ul style="list-style-type: none">- During printing: Terminates printing forcibly and deletes 1 file of remaining data.- During reception/analysis: Deletes the data that has been already received/analyzed and ignores 1 file of data received after that.
	[Cut] key	DO NOT USE
4	[Back] key	DO NOT USE except to toggle Roll Lamp (below) to Green



Anatomy: Control Panel (cont.)

No	Name	Normal Operation Function
----	------	---------------------------

5	[Next] key	DO NOT USE
---	------------	------------

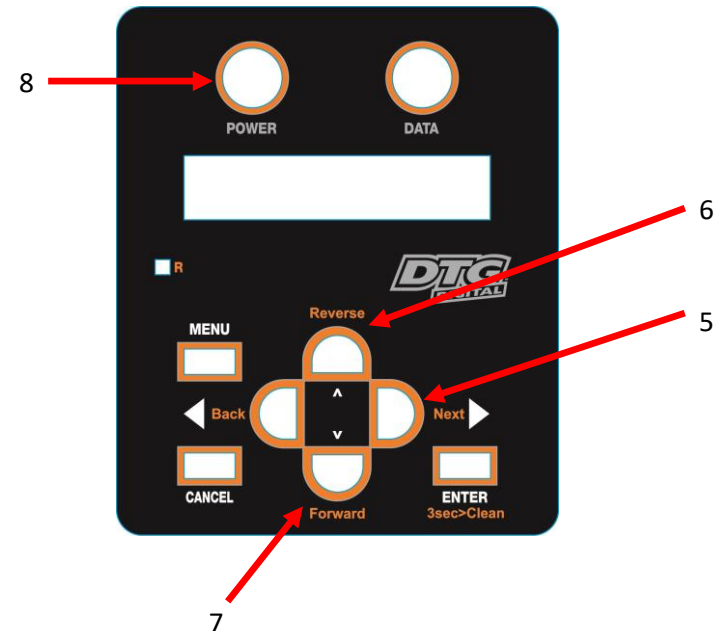
6	[Reverse feed] key	DO NOT USE
---	--------------------	------------

	[^] key	DO NOT USE
--	-----------	------------

7	[Forward feed] key	DO NOT USE
---	--------------------	------------

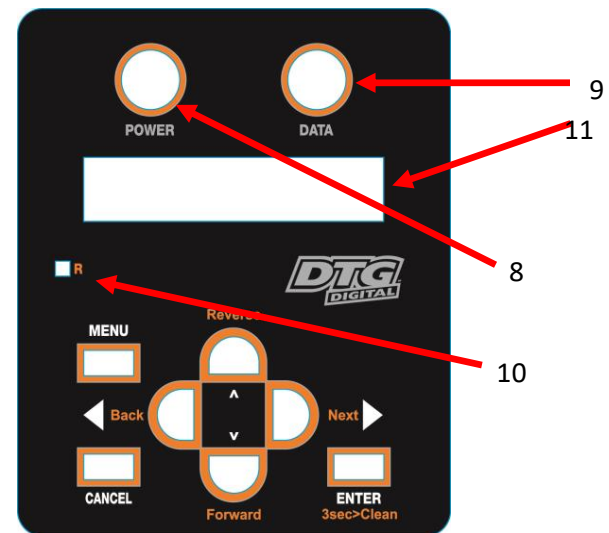
	[v] key	-
--	-----------	---

8	[Power] key	Turns the printer on and off.
---	-------------	-------------------------------



Anatomy: Control Panel (cont.)

No	Name	Normal Operation Function		
8	Power lamp	Green	On	The printer is switched on.
			Blinking	An error has occurred. Error content will be displayed on the LCD monitor.
			Off	The printer is switched off.
9	Data lamp	Red	On	- The printer is analyzing received data. - The printer is printing data.
			Blinking	The printer is receiving data.
			Off	The printer is not receiving, analyzing or printing data.
10	Roll lamp	Green	On	The printer is set to roll media.
			Off	The printer is set to cut media.
			Off	INCORRECT SETTING
			Off	The printer is set to roll sheet.
			Off	INCORRECT SETTING The plot mode is set to High speed. INCORRECT SETTING
11	LCD monitor	-	-	This monitor displays the operation status and error messages of the printer.



Anatomy: Emergency Stop Switch

Emergency Stop Switch:

- The Emergency Stop button, on the front of the printer, is used for a variety of reasons. Pressing this button will immediately cut power to the printer & stop the print job.
 - It is used in emergency situations, as well as during maintenance on the machine
- To restore power:
Rotate the red cap of the emergency stop button clockwise to allow the printer to receive power.
 - **BE SURE TO RESET** this before the initial powering up of the machine



Anatomy: Waste Ink Container

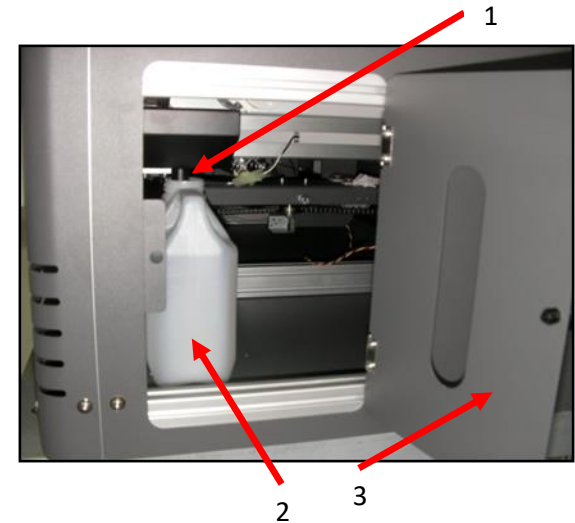
- As you use your M2 there will inevitably be waste ink. This is collected in the waste ink container.
- Check this bottle regularly, and empty it when it is getting full, or before an ink flush or power clean procedure. Remember you must comply with local regulations in disposing of its contents.
- Make sure the tube from the machine is in the mouth of the waste ink container.

Anatomy: Waste Ink Container (cont.)

NOTE

No tools are required for this procedure. Waste ink should be checked on a daily basis and disposed of in strict accordance with local ordinances and regulations.

1. Open the waste container door to allow access to the container.
2. To replace or remove, carefully tip the container so that the base comes towards you.
3. Ensure that the container opening clears the waste pipe.
4. Remove the container through the waste container door



No.	Part Name
1	Waste Pipe
2	Waste Container
3	Waste Container Door

CAUTION

Be sure to dispose of waste ink in strict accordance with local ordinances and regulations.

Anatomy: Ink Bottles and Tubes

- It is recommended that you keep your bulk ink bottles (particularly the white ink) $\frac{1}{2}$ to $\frac{3}{4}$ full at all times. It is important that the white ink system in particular does not suck dry. **Note: The pick up tube, in the white ink bottle, does not go to the bottom of the bottle.**
- Each bottle is labeled with a color wrap to indicate the bottle to which it attaches. It is important to that these colors match the bottles to which they go.
- The white ink management system has 3 parts: The pump, WIMS Filter, and stirrer motor assembly. The pump is a peristaltic pump, that uses rollers to massage the tube forcing ink into the system. This pump also circulates the ink, to prevent the ink from separating. The WIMS filter filters out any large particles which may be found in the white ink. The stirrer motor assembly keeps the white ink agitated, thus preventing it from separating. Set the timer to rest for 3 hours and stir/circulate for 12 – 15 minutes.
- Ensure that any ink spills, on or around the ink bottles in particular, are cleaned immediately. If spilled ink dries on the ink bottles, specifically near the threads of the bottles or the lids, then that dried ink can potentially flake & transfer into the ink within the ink bottles. Those flakes of ink can make their way through the ink tubing and block the dampers and/or the print head.

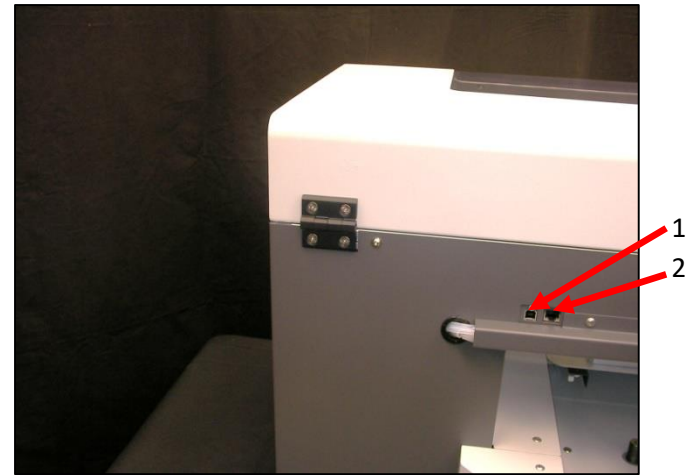


Anatomy: Input and Power Supply

Connecting the Ethernet:

The DTG M2 has both Ethernet and USB interface ports for connection to the PC. We recommend using the USB cable, supplied with the machine, to connect to your computer.

1. Turn off both your PC and the printer
2. Insert the network interface cable connector into the network interface connector port located at the rear of the printer:



No.	Part Name
1	USB interface connector port
2	Network interface connector port

Connect the other network interface connector to your PC.

TIP

Refer to the Operation Manual of your PC for connection to your PC

Anatomy: Input and Power Supply

- ***Connecting USB interface cable:***

Steps:

1. Insert the USB cable into the USB connector on the back of the M2.
2. Connect the other USB cable connector to your PC.

TIP

3. Refer to the Operation Manual of your PC for the connection to your PC
4. USB connection supports Windows 98 and higher
5. This printer supports USB 2.0. If the connection is made under the following conditions, the speed may decrease to the level measure ins USB1.1
 - When the USB connection is used in Windows 98
 - When your PC does not support USB 2.0
 - When a USB hub of not USB 2.0 type is used

- ❖ For your power supply, push the supplied cord into the machine very tight
 - ❖ It is a good idea to use a UPS (power line conditioner, with a battery backup and surge protection, especially in areas with frequent brownouts or drops in the electrical current.

Anatomy: Cont.

- ❖ CR Motor (carriage motor)
 - ❖ This is what moves the print head
- ❖ Platen tray bed
- ❖ Platen tray drive belt
 - ❖ This loads and ejects the platen tray
- ❖ Chain drive system
- ❖ Rotary encoder for the PF
 - ❖ This ensures the printer is printing in the correct position
- ❖ Bed buttons (located on the left side of the bed tray)
 - ❖ Raises and lowers the bed, to set the gap height
- ❖ Load/Eject buttons
 - ❖ Load- this brings the platen tray into the machine – toward the back
 - ❖ Eject – this brings the platen tray out of the machine – toward the front

Anatomy: Cont.

- ❖ Print head carriage
 - ❖ Contains the print head, dampers, and conversion board
- ❖ Dampers
 - ❖ Filters the ink before it goes through the print head
- ❖ FFC Cables (ribbon cables)
- ❖ Ink delivery system (tubing harness)
 - ❖ Delivers ink from the supply bottles to the print head
- ❖ Carriage release button
 - ❖ Allows for the manual undocking of the print head
- ❖ Spit Pad
 - ❖ The head fires into this pad to equalize pressure
- ❖ Wiper blade
 - ❖ Squeegee type device, which wipes excess ink from the surface of the print head, during the cleaning process

Anatomy: Cont.

❖ Capping Station

- ❖ Seals the print head , so air does not get to the print head
- ❖ Air getting to the print head is what causes it to clog

❖ Air Pressure

- ❖ Located in the rear, right hand corner (if you are facing the front of the machine)

❖ Ink pressure pump status

- ❖ When the light is GREEN, the pressure is ok.
- ❖ When alarm is sounding, the bottles are loosing pressure. To resolve, tighten the lids on the ink bottles, then press the reset.

❖ Boards

To see a video on this process please visit: http://youtu.be/xAmA5R_ekV4

Power Up

- A. Plug in power cord – We recommend using a UPS (Universal Power Supply)
 - 1) UPS is a universal/uninterrupted power supply. It has a battery backup and a line conditioner
- B. Make sure the emergency stop button is not pressed in
 - 1) Turn it to the right to reset it
- C. Push on the power button
 - 1) WIMS motor will turn on
 - 2) The display screen will display different messages
- D. If the ink pressure alarm comes on, tighten the lids of the color ink bottles, then press the restart button
- E. Plug the USB cable into the machine

Power Up (Cont)

- F. The machine will say “Cover Open” as long as the bed and platen are not loaded in the machine (in order for them to be considered loaded, the “Bed Load” light, on the right hand side of the bed, will be “Green”. **This is the NORMAL STATUS**, and does not mean the cover is open. Again, **this is not an error, as the machine will always say this when not loaded.**

[Click here for Power Up video](#)

Filling the M2 “X” Series with Ink

- A. Make sure that you NEVER put pretreat into your DTG M2
- B. Check your white ink line connections
- C. **Disconnect** the WIMS power supply (Blue connection)
- D. Be sure to empty out any residual shipping fluid, from the white ink bottle
- E. Unscrew the white ink bottle
- F. Swirl the white ink for 1 to 2 minutes
 - 1) Any white ink that is not in the machine must be shaken 2-3 times per week (preferably, **every day**)
 - 2) Full is about ¼” below the bottom edge of the cap
 - 3) Always keep the white ink bottle at least halfway full
 - A. The pick up tube does not go down to the bottom of the bottle

Filling the M2 “X” Series with Ink (cont)

- G. For color ink, simply replace the empty bottles on the machine for the full ink bottles (Provided the ink is in 8oz bottles with a large mouth, just like the empty bottles)
- 1) Retain the empty bottles
 - 2) Make sure the cap is on tight to build up pressure
 - a) To tighten the bottles, spin the bottles, not the lids, to keep the tubing from becoming twisted
 - 3) Be sure the correct color ink bottle matches the label (plastic color indicator) on the tubing
 - 4) Make sure the shutoff valves are all the way open (Up)

Filling the M2 “X” Series with Ink (cont)

H. Fill the M2X with ink by doing ink charges

- 1) Load the machine
 - a) The control panel says “Cover Open”
 - b) The light, by the load/eject buttons, is red right now
 - c) Press the “Load” button
 - 1) The machine will beep two times, then the bed will load towards the back of the machine
 - d) The bed will stop, beep 5 times, then the load/eject light will turn green
 - 1) The control panel will say “Print Ready”
- 2) Press the “Menu” button
 - a) The control panel will say “Test Print”
- 3) Press the “Next” button until the control panel says “Cleaning”(should be 4 times)
- 4) Press the “Enter” button
 - a) The control panel will say “Short”

Filling the M2 “X” Series with Ink (cont)

- 5) Press the “forward” button until control panel says “Longer”(should be once)
- 6) Press the “Enter” button
 - a) The display will say “Ink Refill 3 min”
 - 1) The machine will count down to 2 minutes then 1 minute, as it performs the long head cleaning
 - b) When done, the machine will stop and the display will say “Print Ready”
- 7) Repeat steps 2-10, until your ink lines are full of ink all the way to the print head, and the dampers are full
- 8) Set the timer on the white ink pod
 - a) Rest on 3 hours
 - b) Stir on 12-15 minutes
 - c) Now that the printer has ink in it, NEVER turn it off**
- 9) Now do 1 regular head cleaning, to ensure proper priming of the print head
 - a) **Make sure the bed is in the “LOADED” position**
 - b) Hold “Enter” button for 3 seconds to start a head cleaning

Filling the M2 “X” Series with Ink (cont)

10) Now perform a nozzle check

- a) Load the two platens on the machine (at least the right one)
- b) Place a transparency sheet on the front right hand corner of the right platen (if you are facing the front of the machine)
 - 1) Make sure the transparency hangs over the front and right edges by .25 to .5 inches, and it is oriented in a landscape position.
- c) Push the tray bed into the machine by hand, until the edge of the transparency is just under the cover of the machine
 - 1) This allows the height sensor light to hit the edge of the transparency
- d) Hold the RED bed “Up” button, until the machine stops, then release the button.
 - 1) The light will turn green
- e) Press the bed “Load” button
 - 1) Once loaded, the light will turn green
- f) Press the “menu” button once
 - 1) The display will read “*Menu* Test Print>”
- g) Press the “Enter” button
 - 1) The display will read “Test Print: Setup”
 - 2) We do NOT want this

Filling the M2 “X” Series with Ink (cont)

- 11) Press the “reverse” button until the display reads “Nozzle Check” (should be once)
- 12) Press the “Enter” button
 - a) The machine will print the nozzle check pattern on the transparency
 - b) We want to see solid lines, without any breaks or holes
 - 1) To see white better, place the transparency in front of a black or dark background
 - 2) To see the colors better, place the transparency in front of a white or light background
- 13) If you do not have a good nozzle check, turn the power off on the control panel, do 1 - 2 more head cleanings, let the machine rest for 5 to 30 minutes, then follow up with another nozzle check
 - a) You may or may not have to let the machine rest. It is based on how your print head reacts to head cleanings.
 - b) On some printers you can do 1 to 2 head cleanings, followed immediately by a nozzle check, and they are fine. Others may be ok after 1 head cleaning but need to rest if consecutive head cleanings are done.

Filling the M2 “X” Series with Ink (cont)

- c) Any time you do 2 head cleanings (or more, but never more than 2 consecutively), or if you are not sure how many head cleanings have been done since you turned off the control panel, you should turn off the power to the control panel.
 - 1) Every third head cleaning, the machine does a small power cleaning, which usually introduces a lot of air to the ink system; which causes the nozzle checks to appear to get worse. The only way to resolve this is to let the machine rest (remain undisturbed) for 10 to 30 minutes, to let the air settle out of the system.
- d) When you do the follow up nozzle check, use the other side of the transparency (do not flip it over, just rotate it 180 degrees)
- e) This will allow you to compare the new check with the previous one, to ensure there was improvement in the results

[Click here for Filling M2 with Ink video](#)

[Click here for Nozzle Check video](#)

Media Set “X” Series

1. Calibrate the page length (Pf - media set length)
 - A. You will need a Metric ruler, paper, and tape
 - B. Use two pieces of 8 ½ X 11 in paper taped together, or one piece of legal size paper (A3)
 - i. Place the paper on the right hand platen (if facing the front of the machine), hanging off the right and front edges slightly (about ½ in). Tape in place.
 - C. Set the gap height
 - D. Load the platen: Control panel will say “Print Ready”, if not, press “Menu”
 - E. To get into the test:
 - i. Press the “menu” button: The display will say “*Menu*Test Print>”
 - ii. Press the “next” button: The display will say “*Menu*Media Set>”
 - iii. Press the “enter” button: The display will say “Media Plain”
 - iv. Press the “enter” button again: The display will now say “Effect: None>”
 - v. Press the “next” button to scroll to “PF: Initial Print”
 - vi. Press the “enter” button. The screen will now say “Feed Length: 250mm”
 - a) 250mm is the setting the machine should be at

Media Set **“X” Series** (Cont.)

- vi. Press the “enter” button
 - a) The machine will now print the black tick marks on the paper, then eject
- F. Now measure the distance between the two tick marks, in mm
- G. Re load the platen with the paper (do not move the paper)
- H. Set the gap height
- I. Load the platen into the machine
- J. Now calibrate with the numbers you just got (from step “F”)
 - i. Press the “menu” button: The display will say “*Menu*Test Print>”
 - ii. Press the “next” button: The display will say “*Menu*Media Set>”
 - iii. Press the “enter” button: The display will say “Media Plain”
 - iv. Press the “enter” button again: The display will now say “Effect: None>”
 - v. Press the “next” button to scroll to “PF: Initial Print”

Media Set **“X” Series** (Cont.)

- vi. Press the “reverse” or “forward” buttons to scroll to “PF: Initial Change”
- vii. Press the “enter” button: The display will say “ 250.0/250mm”
- viii. Use the “forward /reverse” buttons until the value on the screen matches the measurement you took from Step “F”
- ix. Press “enter” button to accept the new value
- x. Ensure “PF: Initial Print” or “PF: Initial Change” is displayed on the control panel
- xi. Press the “forward/reverse” buttons to scroll to “PF: Confirm Print”
- xii. Confirm the Media Feed Length selection
- xiii. Press the “enter” button
 - a) The machine will print the NEW tick marks
- K. The new ticks will be printed in red
- L. Pull the platen out
- M. Measure the distance between the new (red) tick marks, in mm
 - i. It should measure 250mm, exactly

[Click here for Media \(Feed\) Set video](#)

Additional Information (Cont.)

Watch this video to learn how to assemble and adjust your Wagner sprayer:

[Wagner sprayer for pre treatment](#)

Watch this video so you know what to look for when pre treating is NOT done properly:

[Improper Pre treating](#)

Watch this video to learn how to change Dampers:

[Replacing Dampers](#)