Dot Marker Instruction Manual
Model No. JDM - 100

JanTech Marking Equipment
19020 SW Christensen Rd.
McMinnville, Oregon
97128
Email:info@jantech.com
Phone: 1-800-488-6588
Fax: 1-503-843-1161

Version 2.0
June 03 / 2003

Visit us at www.jantech.com

Index:

Safety Instructions:

1. Always wear approved safety glasses and recommended personal protection.

2. Never point ink jet equipment at any person.

3. Always follow handling instructions when working with ink jet inks.

4. Be aware that some ink jet inks are highly flammable and should be handled accordingly.

5. Dispose of all waste in a manor recommended by your local regulatory body.

Equipment Overview:

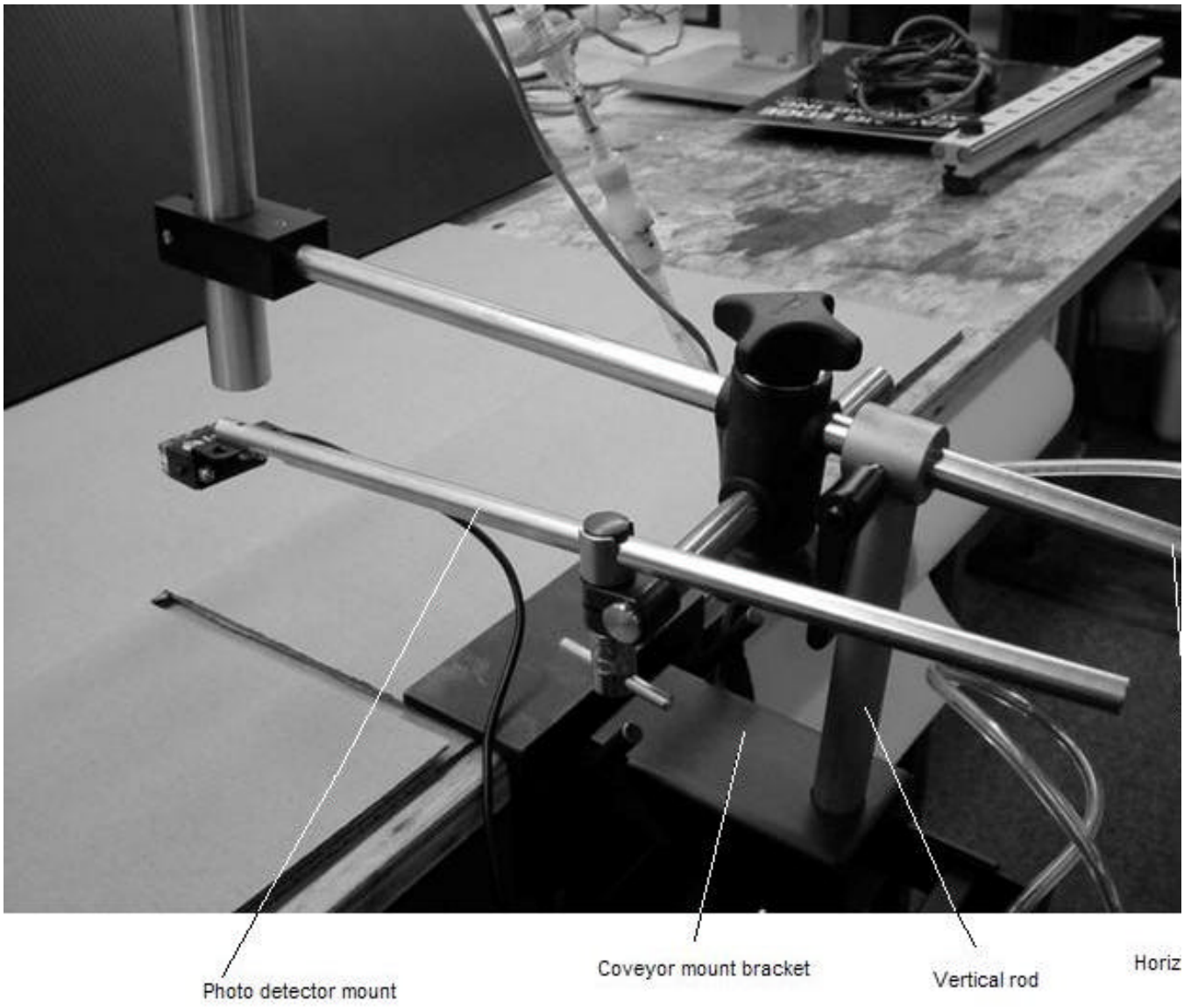


Figure 1.

The DM - 101 system consists of the following components:

Print head - A compact high speed valve designed to run a verity of inks. These include pigmented and dye based inks. Ink bases include water, methanol and Methyl Ethel Keytone.

Ink supply - The ink supply consists of a 1 liter ink supply, air pump, ink line tubing, ink line filter and ink line fittings. (Optional

plant air filter / regulator is available upon request).

Mounting bracket - The supplied mounting bracket and hardware should provide a solution for most installations.

Controller - The DM - 101 controller controls the print head. It provides the driver pulses based on controller setup and input type.

Power supply - The dot marker uses a 24 VDC regulated power supply. This unit is self contained and has no repairable components. It will operate at 110VAC and 220VAC.


A
Ink
Air

Figure 2.

Installation instructions:

Installation of the DM - 101 is in most cases very simple and generally should take less than one hour to complete. As shipped all Dot Marker systems are completely assembled and tested.

When installing this system it is important to look at the installation with the following considerations:

Ease of use

Can the operator get to the equipment when needed?
Is it easy to fill the ink tank?

Risk of damage

Can the unit be damaged by process equipment or product?
Are all cables and lines clear of moving parts?

Quality of print

Will vibration or print distance affect print quality?
Can the print head be positioned correctly?

Once a suitable location has been found:

1. Install the conveyor mount bracket in the location selected.
2. Mount the print head and connect the ink line fittings.
3. Mount the photo detector and photo detector rod.
4. Mount the controller holder on the back of the horizontal rod.
5. Install controller in holder.
6. Connect photo detector to back of controller.
7. Connect print head cable to back of controller.
8. Plug in power supply.
9. Fill ink container.
10. Screw ink cap on tank firmly.
11. Plug in air pump.

Getting ink or solvent to the head:

If the ink line contains air or solvent it may be necessary to bleed the ink line. This is a simple process and can be done without spilling any material. To flush the ink line:

1. Fill ink tank with ink or solvent to be used.
2. Screw tank lid on firmly.
3. Plug in air pump.
4. Disconnect ink line from print head connector at quick disconnect.
5. Point male ink line fitting in paper cup and press fitting release. Solution will run up the line to fitting.
6. Reconnect ink line fitting to print head.
7. Press purge button on controller until new material is fired from head.

Positioning the mark:

1. Position the print head so that its center falls over the location to be marked.
2. Make test mark by pressing the trigger button on the controller.
3. Position the photo detector so that the trigger occurs with the print head at the correct location.
4. “Run” the product to be marked. Adjust the photo detector position so that the mark position is fine tuned.

Maintenance:

The dot marker printer requires only minimal maintenance and in most cases the unit will perform for several years without requiring any outside service.

Daily service:

- Wipe front nozzle with cleaner recommended for ink being used.
- Remove ink container and shake well (pigmented inks only).
- Check all line and wires for damage from surrounding equipment.

Monthly service: (pigmented systems only)

- Remove all ink from tank. (Save ink clean container for reuse).
- Clean bottom of ink tank.
- Flush ink lines with solvent or cleaner.

Annual service:

- Replace ink container.
- Replace ink / air lines.
- Replace print head filter.

Controller:

The DM - 101 controller is designed to meet most dot marker requirements. As shipped the unit is in single shot mode. The unit will also operate in continuous and burst modes. These are internally selected. Contact you Dot Marker supplier for further instructions.

Jumpers:

Single shot mode

Single shot produces a single dot when the unit is triggered. The jumper is labeled on the card as “S. SHOT”

Continuous mode

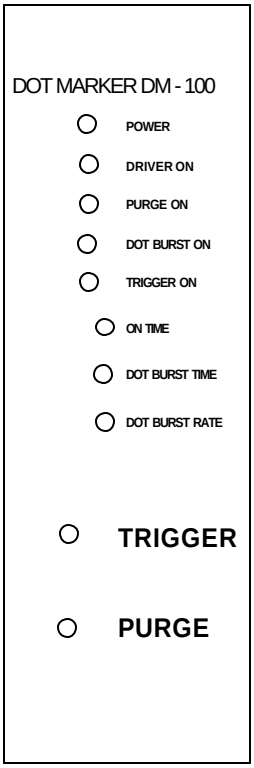
The unit will produce a “line” of dots as long as the trigger is active. The jumper is labeled on the board as “CONT”.

Burst mode

The unit produces a line of dots that can be adjusted in length. The jumper is labeled on the as “BURST”

Burst range

The burst range increase the range of the burst mode when a jumper is in place. The jumper on the board is labeled “BRST RANGE”



Indicators:

Power LED	-	Power is connected.
Driver on LED	-	Makes a short flash when unit is triggered.
Purge on LED	-	On continuously when purging.
Dot burst on LED	-	Lights when for burst period when unit is in burst mode
Trigger on LED	-	Lights when trigger button is pressed or photo detector is active.

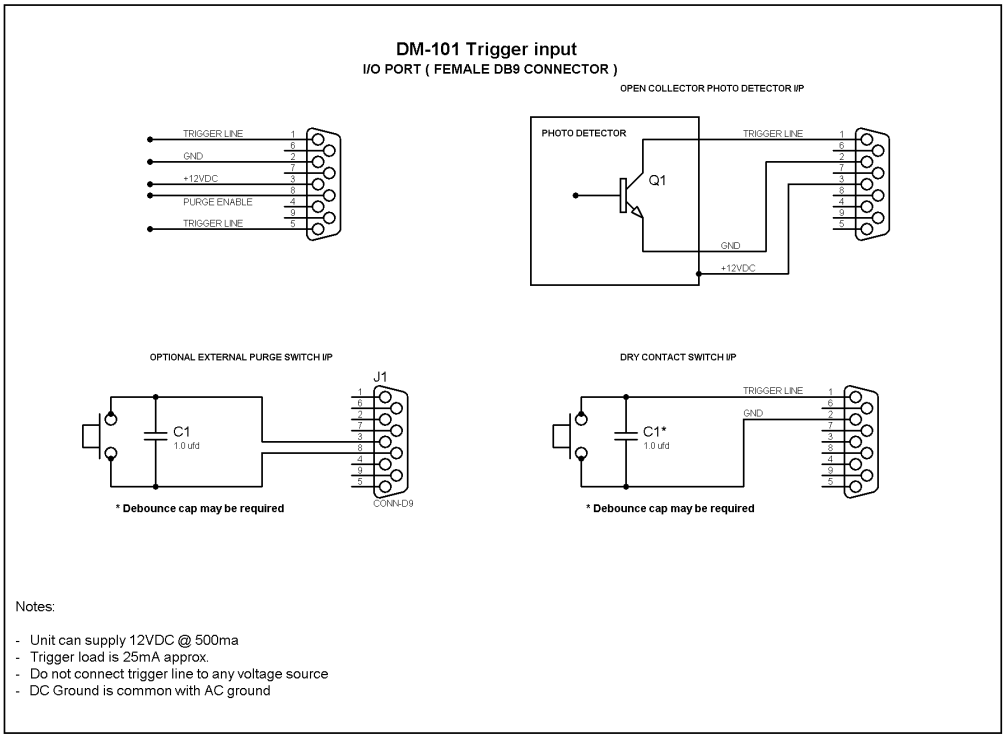
Adjustments:

On time	-	Controls the size of the dot by adjusting valve on time.
Burst rate	-	Controls output rate when in burst mode.

Burst time	-	Controls the length of burst when in burst mode.

Buttons:

Purge	-	Repeatedly fires head at a rate of about 200 times per second.
Trigger	-	Triggers unit from front panel.



Schematics:

Schematics supplied upon request.

MSDS:

MSDS supplied upon request.