

# DK118 DIGITAL LIQUID DISPENSER

## *OPERATING MANUAL*



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# DK118

The DK118 digital liquid dispenser is perfectly suited for a wide variety of dispensing applications, from microdot deposits to large potting and filling. Suitable for all types of fluids, includes a suck-back feature to ensure low viscosity liquids do not drip. All set up hoses and fittings, along with barrels and tips, make the unit ready to use right out of the box.

The digital display allows the operator to monitor either the dispense time or the pressure measurement. DK118 also features an I/O port that can be used as interface for external devices.

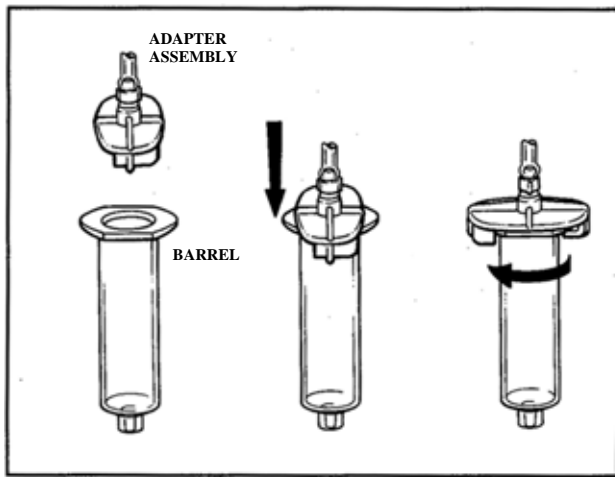
## Standard Accessories

Qty	Description	Re-order P/N	Re-order Qty/Pkg
1	Power cord – 110V unit	560033	1
1	Power cord – 220V unit	560033E-CE	1
1	Power cord – 220V unit	560033E-PLUG	1
1	Barrel stand	560751B	1
1	Air hose	561851	1
1	Foot pedal & cord	560027CW	1
1	30 cc barrel adapter	560004A	1
1	5 cc barrel adapter	560003A	1
3	30 cc barrel	560002D	10
3	5 cc barrel	560001A	10
3	30 cc barrel piston PE	560552	20
3	5 cc barrel piston PE	560550	40
2	Barrel tip cap	580142	10
2	14 gage tapered tip	560783K	25
2	16 gage tapered tip	560010K	25
2	18 gage tapered tip	560011K	25
2	20 gage tapered tip	560012K	25
2	22 gage tapered tip	560013K	25
2	24 gage tapered tip	561338K	25
2	20 gage blunt end tip	560088	25
2	21 gage blunt end tip	560089	25
2	22 gage blunt end tip	560090	25
2	23 gage blunt end tip	560014	25
2	25 gage blunt end tip	560015	25
2	30 gage blunt end tip	560016	25

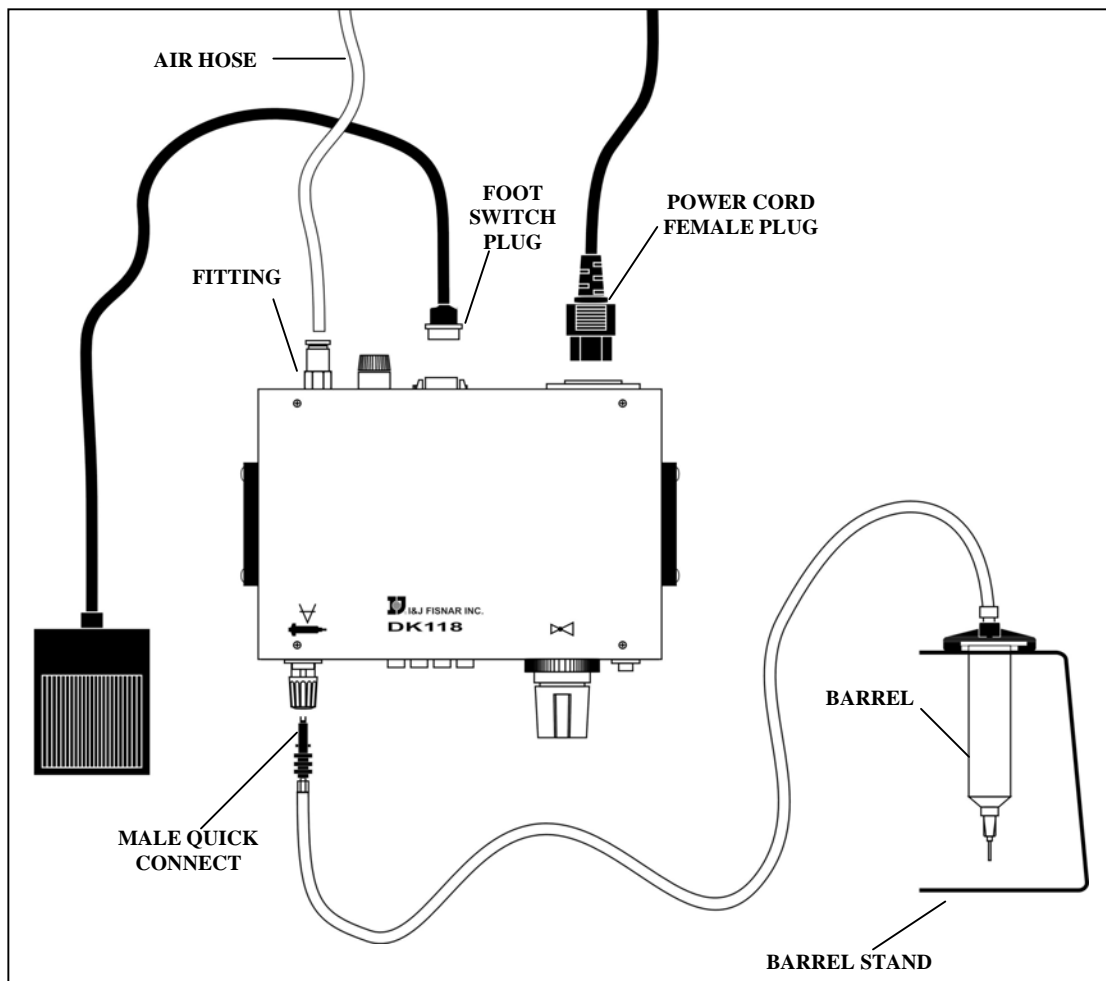
## Specifications

<b>I/O Port:</b>	Interface for External Devices
<b>Size:</b>	9" x 8 1/2" x 3 1/4" (23 x 21.50 x 8.25 cm)
<b>Weight:</b>	3.5lbs (1.59kg)
<b>Input Voltage:</b>	115V/230V (Voltage Select Switch)
<b>Dispense Time:</b>	0.01 – 99.9 seconds
<b>Internal Voltage:</b>	5V dc
<b>Cycle Initiation:</b>	Maintained or Momentary
<b>Cycle Speed:</b>	600+ /Minute
<b>Air Input:</b>	70-100 psi (5-7 bar)
<b>Air Output:</b>	1-100 psi (0.1-7 bar)
<b>Barrel “Suck-Back” Feature:</b>	Low Viscosity Liquids Do Not Drip
<b>Digital Display:</b>	Pressure or Time Display

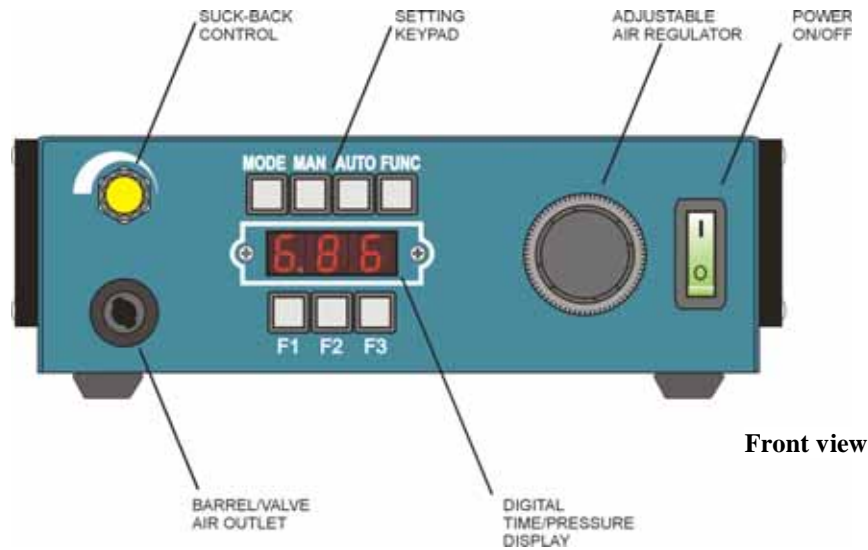
## AIR & ELECTRICAL SET UP



1. Connect air hose to filtered compressed air 70 - 100 psi (5-7 bar) and connect fitting to dispenser.
2. Insert foot switch plug into dispenser.
3. Insert and twist male quick connect into dispenser.
4. SET THE VOLTAGE SELECT SWITCH ON BACK OF UNIT TO THE DESIRED VOLTAGE. Insert power cord female plug into dispenser and insert the male plug into a grounded outlet.
5. Fill barrel (with barrel tip cap on the barrel) with material to be dispensed and lock barrel to adapter assembly as shown.



## UNDERSTANDING THE FUNCTIONS OF YOUR DISPENSER DISPLAY



**MODE** - Switches between time and pressure display.  
When power is turned ON, the last dispense time will be displayed. Press **MODE** switch once to display the pressure measurement. A second press returns the unit to time display.

NOTE: While pressure measurement is displayed, the other switches are disabled and the unit will not dispense.

**MANU** - Switches the unit to MANUAL OPERATION (the dispenser will provide continuous flow of material as long as the foot switch is depressed).

**AUTO** - Switches the unit to AUTOMATIC OPERATION (the unit will dispense material for a preset period of time, each time the foot switch is pressed).

NOTE: When power is turned ON, the unit is set in AUTOMATIC OPERATION.

**FUNC** - Switches the functions of **F1**, **F2** and **F3** keys.

When power is turned ON, **F1**, **F2** and **F3** buttons can be used for selecting the time range (positioning the decimal point):

Press **F1** to set the time range between 0.01 and 9.99 sec

Press **F2** to set the time range between 00.1 and 99.9 sec

Press **F3** to set the time range between .001 and .999 sec

By pressing the **FUNC** button, the **F1**, **F2** and **F3** keys become digit set switches for their respective digits: each press of any of these three switches advances its respective digit by one.

While setting the digits, the other switches (**MODE**, **MANU** and **AUTO**) are disabled.

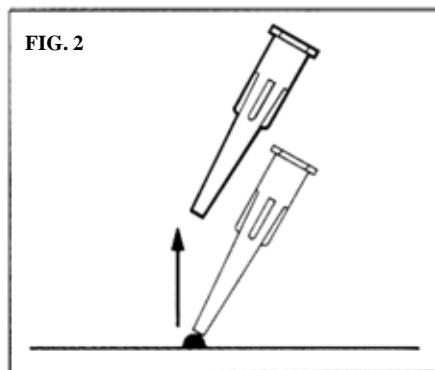
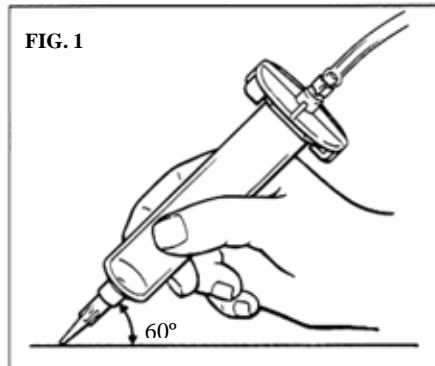
When all three digits have been set, press **FUNC** a second time to return the unit to AUTOMATIC OPERATION.

**IMPORTANT:** Whenever power is turned OFF, the last dispense time displayed is stored into memory.

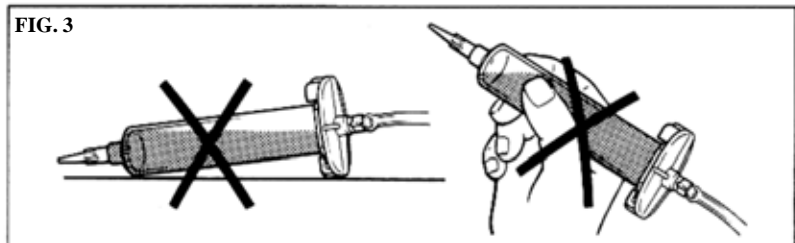


**Back view**

## HELPFUL HINTS FOR MAKING DEPOSITS



1. Hold the barrel at approximately 60° ( $\pm 20^\circ$ ) angle (Fig. 1).
2. After making deposit remove tip as shown (Fig. 2).
3. Do not permit the liquid to flow back into the controller as shown in Fig. 3.



4. Increase or decrease size of dots by either:
  - Increasing or decreasing time only
  - Increasing or decreasing pressure only
  - Increasing or decreasing size of tip
  - Increasing or decreasing any combination of time, pressure and size of tip.
5. To increase pressure, turn the air regulator clockwise. To decrease pressure, first turn the air regulator counterclockwise past the value desired and then clockwise to the value desired.
6. For thin liquids, like water, you can prevent dripping by slowing turning the suck-back control counterclockwise. **WARNING** – Too much vacuum will cause bubbles and suck liquid back into the controller, thus creating permanent damage to the unit.

# I/O PORT FEATURES

## OPERATING THE DK118 THROUGH EXTERNAL DEVICES:

DK118 can be activated using a positive external signal 5 to 24V supplied between pins 1 and 2 on the I/O port connector. External and internal circuits are optocoupler isolated.

Another alternative of activating the DK118 through the I/O port is using an AUX foot switch, providing dry closure between pin 5 and pin 7. Pin 6 is for EMI Ground.

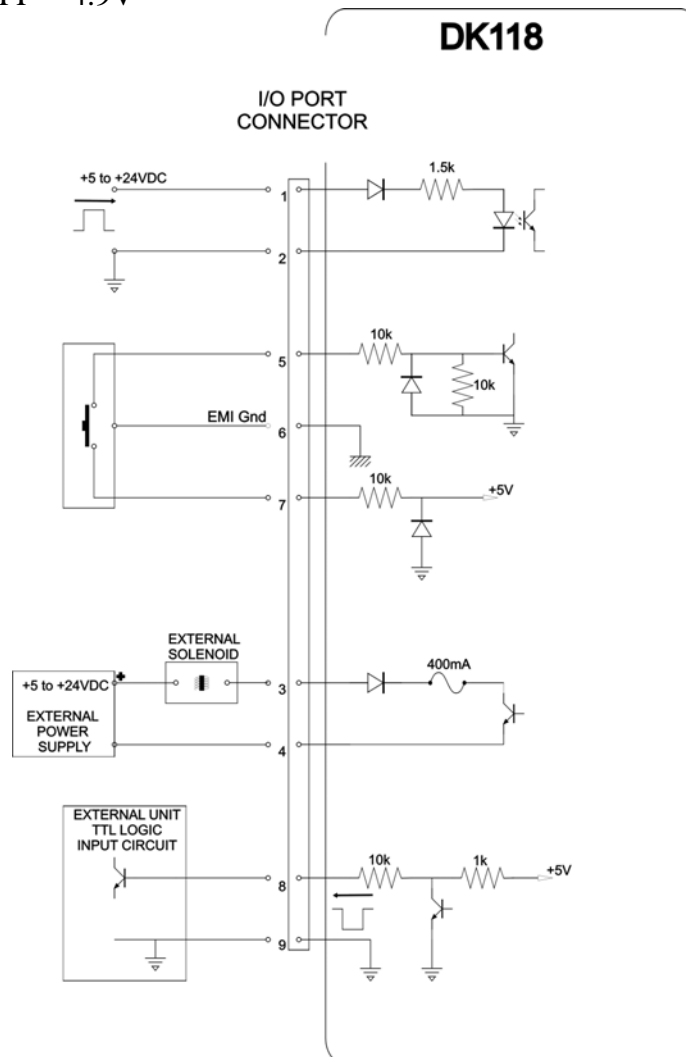
## OPERATING EXTERNAL DEVICES THROUGH DK118:

Pins 3 and 4 provide an option of activating external solenoid with  $I_{max}$  400mA. External power supply must be provided.

Feedback feature with TTL compatible signal is available on pins 8 and 9.

Solenoid ON ~ 0.1V

Solenoid OFF ~ 4.9V



# LIMITED WARRANTY

Manufacturer warrants this product to the original purchaser for a period of two (2) years from the date of purchase to be free from defects in material and workmanship, but not against damages caused by misuse, negligence, accident, faulty installation, abrasion, corrosion or by not operating in accordance with factory recommendations and instructions. Manufacturer will repair or replace (at factory's option), free of charge, any component of the equipment thus found to be defective, upon return of the component to the factory during the warranty period of the equipment. In no event shall any liability or obligation of Manufacturer arising from this warranty exceed the purchase price of the equipment. This warranty is valid only when 5 micron filtered air is used. The manufacturer's written liability, as stated herein, cannot be altered or enlarged except by a written statement signed by an officer of the company. In no event shall manufacturer be liable for consequential or incidental damages. A return authorization is required from I&J FISNAR INC. prior to shipping a defective unit to the factory.

Manufacturer reserves the right to make engineering or product modifications without notice.



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