



PPG Industries
Semco® Packaging &
Application Systems

Sematic® 2200 Automatic Liquid Dispenser
Operating Manual



Where Smart Solutions Take Flight™

TM

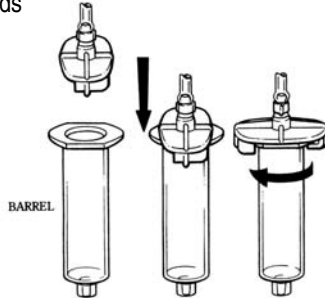
Semmatic® 2200 Automatic Liquid Dispenser Operating Manual

Semmatic® 2200 automatic liquid dispensers with their versatile design make them perfectly suited for a wide variety of dispensing applications, from microdot deposits to large potting and filling.

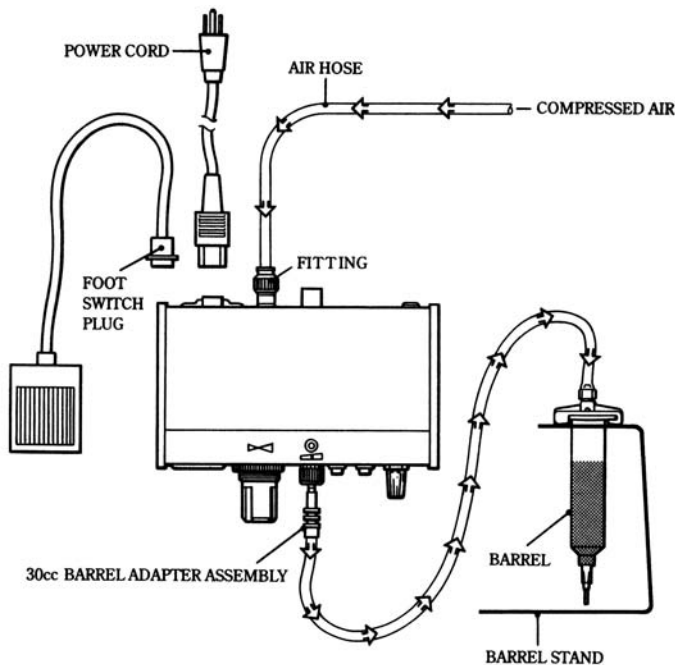
- Digital Timer Control
- No Dripping on very low viscosity liquids
- Timing intervals from 0.01-31 seconds

I. Setting 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.
3. Insert and twist 30cc barrel adaptor connector to 30cc barrel.
4. Insert power cord female plug into dispenser and insert the male plug into a grounded outlet – CHECK VOLTAGE LABEL on back of unit.
5. Fill barrel (with Barrel Tip Cap on the Barrel) with material to be dispensed and lock barrel to adaptor as shown.



II. Air & Electrical Set Up Diagram



Specifications

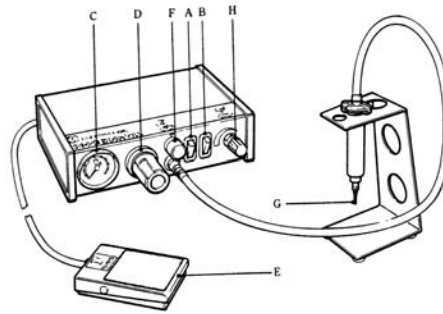
Part Number 500000	Semmatic® 2200 with Accessories
Digital Timer	Programmable 0.01-1, 0.1-10, 0.2-20 and 0.3-30 seconds
Cycle Initiation	Maintained or Momentary
Repeat Tolerance	0.1%
Size	8 5/8" x 8 1/2" x 2 2 5/8" (22 cm x 21 cm x 6.7 cm)
Internal & Foot Pedal Voltage	24 vdc
Cycle Speed	600+/Minute
Air Input	70-100 psi (5-7 bar)
Air Output	1-100 psi (0.1-7 bar)
Barrel "Suck Back" feature	

Dispensing Accessories Supplied with Unit

Qty.	Part Number	Description
1 Ea	361000	10cc Adaptor Head Assembly
1 Ea	363000	30cc Adapter Head Assembly
3 Ea	361016	10cc Hybrid Syringe Barrel Natural
3 Ea	363016	30cc Hybrid Syringe Barrel Natural
3 Ea	361005	10cc P-Piston Yellow
3 Ea	361035	10cc WP-Piston White
3 Ea	363005	30cc P-Piston Yellow
3 Ea	363035	30cc WP-Piston White
3 Ea	361003	10cc Flange Cap Red
3 Ea	363003	30cc Flange Cap Red
6 Ea	310045	Black Spiked tip Cap
1 Ea	231843	14 Gage Needle, Dark Green
1 Ea	231846	15 Gage Needle, Orange
1 Ea	231849	18 Gage Needle, Pink
1 Ea	231852	19 Gage Needle, Brown
1 Ea	231853	20 Gage Needle, Yellow
1 Ea	231856	21 Gage Needle, Green
1 Ea	231857	22 Gage Needle, Black
1 Ea	231860	23 Gage Needle, Light Blue
1 Ea	231863	25 Gage Needle, Blue
1 Ea	231866	26 Gage Needle, Peach
1 Ea	231867	27 Gage Needle, Tan
1 Ea	231869	30 Gage Needle, Lavender
1 Ea	232728	14 Gage Plastic Needle, Dark Green
1 Ea	232734	18 Gage Plastic Needle, Pink
1 Ea	232749	30 Gage Plastic Needle, Lavender

Understanding the Functions of your Dispenser Display

- A. Turn unit on.
- B. Turn amber light on. This will provide continuous flow of material as long as the foot pedal is depressed.
- C. Turning the pressure adjust knob (D) allows for adjustments of air pressure.
- E. Push foot pedal to start dispensing.



The amount of liquid dispensed depends on air pressure, size of dispense tip (G), viscosity of material and time of pulse (F). To produce timed deposits, press (B) to turn amber light off.

Helpful Hints for Making Deposits

1. Hold the barrel at approximately 60° (+ or - 20°) 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 (Fig. 3).
4. Increase or decrease size of dots by either:
 - Increasing or decreasing time only (F) **OR**
 - Increasing or decreasing pressure only (C) (D), **OR**
 - Increasing or decreasing size of tip (G)
 - Increasing or decreasing any combination of time, pressure and size of tip.
5. For thin liquids, like water, you can prevent dripping by slowly turning the vacuum control (H) counter clockwise. Too much vacuum will cause bubbles and suck liquid back into the controller thus creating permanent damage to the unit.

Fig. 1

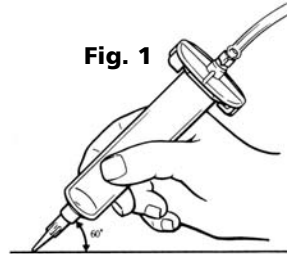


Fig. 2

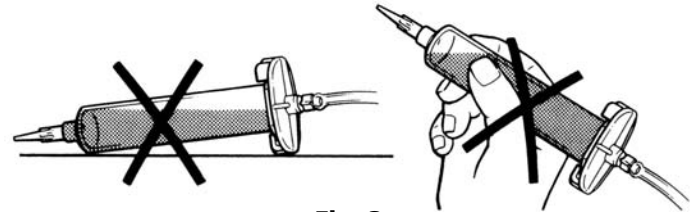
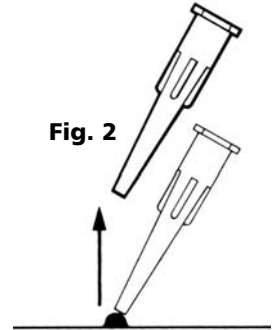
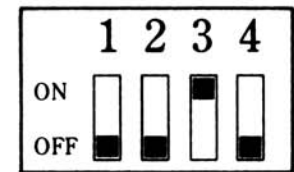
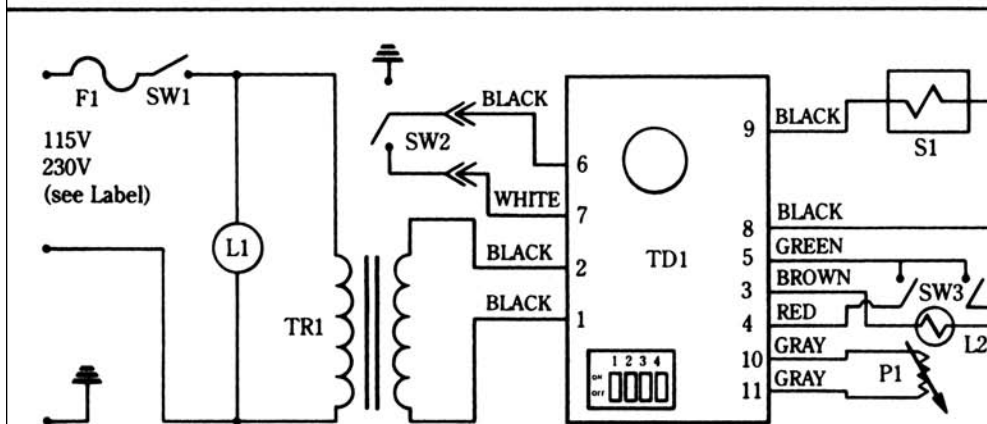


Fig. 3

ELECTRICAL SCHEMATIC

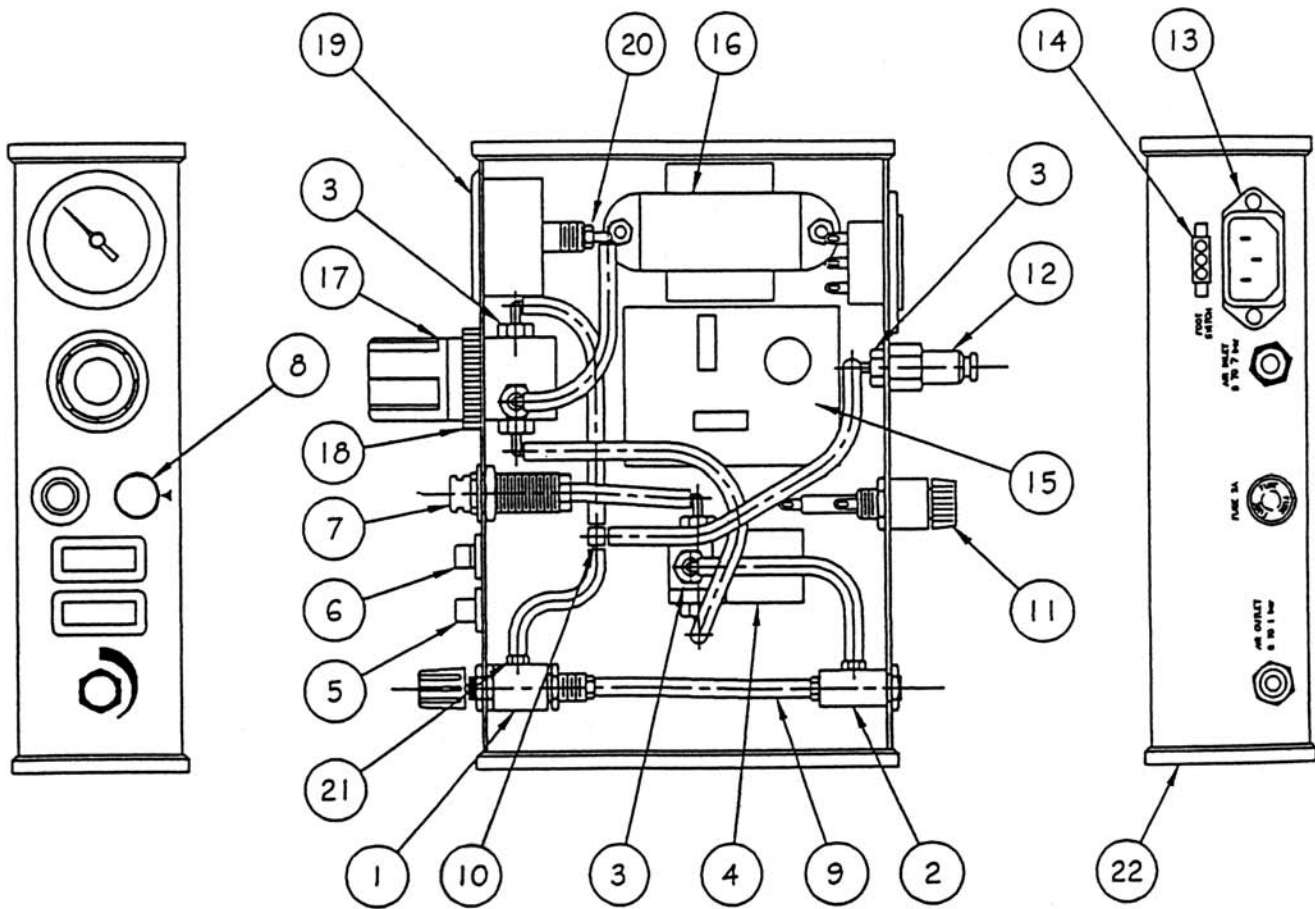
TIMER MODES



- | | | |
|--------|-----------------|-----|
| #1 | ON = 0.2-20 | SEC |
| #2 | ON = 0.1-10 | SEC |
| #3 | ON = 0.01-1 | SEC |
| #1,2,3 | ON = 0.3-31 | SEC |
| #1,2,3 | OFF = 0.005-0.4 | SEC |
| #4 | Initiate Mode | |
| | ON = maintained | |
| | OFF = momentary | |

Part Number	Description
F1	500027 Fuse 115 VAC
SW1	500010 Power Switch 115V
SW2	500028 Foot Pedal Switch
SW3	500009 Steady Switch
S1	500008 Solenoid
TD1	500019 PC Board
P1	500012 Timer Potentiometer
TR1	500020 Transformer 115V-24V

NOTE: Circuit is operated by switch SW2 closure. If control is transferred from foot pedal to external device, be sure NO VOLTAGE is introduced into the circuit. Use only mechanical relay or switch to provide contact closure.



Semmatic® 2200 Automatic Dispenser

No.	Part Number	Description	Qty.
1	500005	Needle Valve	1
2	500006	Vacuum Transducer	1
3	500007	Nylon Elbow	7
4	500008	Solenoid	1
5	500009	Steady Switch	1
6	500010	Power Switch	1
7	500011	Female Quick Connect	1
8	500012	Potentiometer	1
9	500013	Blue Urethane Tubing	2
10	500014	Barb Tee	1
11	500015	Fuse Holder	1
12	500016	Air Inlet Fitting	1
13	500017	AC Receptacle	1
14	500018	Plug	1
15	500019	PC Board	1
16	500020	Transformer	1
17	500021	Regulator	1
18	500022	Regulator, Mounting Ring	1
19	500023	Gage, 0-100 PSI	1
20	500024	Barbed Elbow	1
21	500025	Nylon Fitting	2
22	500026	JB Side Panel	2

NOTE: All tubing is the same. Tubing P/N 500013. This tubing must be ordered by length (feet).

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting for his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.



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