

# Ultimus™ I, II and III Dispensing Workstation

## Quick Start Guide

Electronic pdf files of EFD manuals are also available at [www.efd-inc.com/manuals/](http://www.efd-inc.com/manuals/)

### Easy 14-Step Setup

Follow these steps to get your Ultimus ready for operation.



#### Unpack the Unit/Warranty

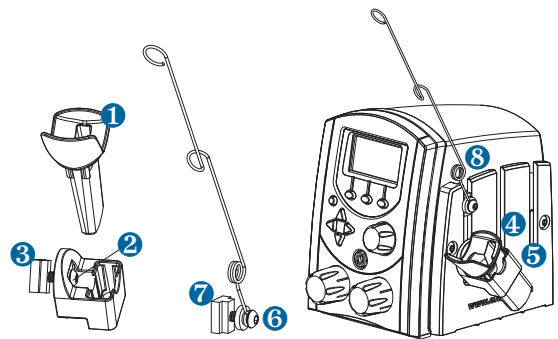
# 1

- Unpack the unit.
- Now is a good time to activate your extended Ten Year No-Fault Warranty. Register the warranty online at [www.efd-inc.com/warranty/ten](http://www.efd-inc.com/warranty/ten).

#### Install Barrel Holder

# 2

- Remove barrel holder sleeve from holder. ❶
- Loosen the 6 mm screw from T-nut. ❷
- Slide T-nut into left or right panel of workstation slot, positioning as shown. ❸
- Tighten 6 mm screw, securing holder to workstation panel. ❹
- Insert barrel holder sleeve. ❺
- Loosen screw from wire hose holder T-nut. ❻
- Slide T-nut into any workstation slot. ❼
- Tighten screw to secure wire hose holder to workstation. ❽



#### Connect Power

# 3

- Connect the power plug to the power pack. The unit is shipped with a USA-compatible plug and three international plugs. Attach the correct plug to match local power outlets.
- Connect the power cord into the back of the Ultimus.
- Connect the power cord into your local power source.
- Press the power switch on the front panel.



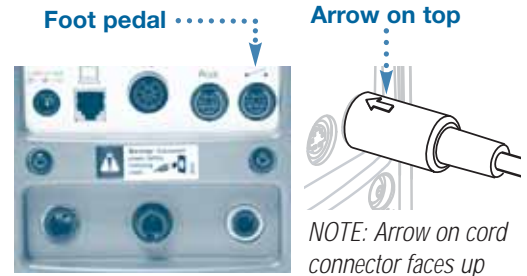
## Connect Foot Pedal

# 4

The Ultimius is normally operated using the foot pedal provided.

- Plug the foot pedal into the back of the Ultimius.

*You can also operate the Ultimius with an optional finger switch or a 5 to 24 VDC pulse. See the User's Guide for details.*



## Connect Air Input

# 5

**Note: Clean, dry, filtered factory air is required to meet warranty. If your air supply is not filtered, order the five-micron filter regulator (#7002002).**

- Push one end of the air input hose into the input fitting on the back of the Ultimius.
- Connect the other end of the air input hose to your plant air supply.

For all Ultimius units: Set plant air supply within 80 to 100 psi (5.5 bar to 6.9 bar).



## Connect Air Output

# 6

- Push in the EFD adapter assembly provided into the back of the Ultimius and twist to lock.

*The Ultimius features two air output connections. You can connect the adapter assembly to the back panel or to the front panel, whichever is most convenient.*



Front panel output air



Back panel output air

## Attach Syringe Barrel & Tip

# 7

- Secure an EFD syringe barrel filled with your fluid to the adapter assembly.
- Replace tip cap with an EFD precision dispense tip.

*See the User's Guide for syringe barrel filling techniques.*



## Select Timed Mode

# 8

When powered for the first time, the Ultimius Home screen displays in TIMED mode. Otherwise, it displays in the mode last used.

- You can verify what mode you are in by checking the top left corner of the display screen. It will be TIMED, TEACH, STEADY or MEMORY.
- If needed, return to the Home screen from TEACH or STEADY mode by pressing TIMED in the bottom right corner of the display.
- Return to the Home screen from MEMORY mode by pressing MENU, then selecting TIMED.

Timed Mode



Menu ...

See the Ultimius Icon Guide, included with your dispensing system, if you are working in Chinese, Japanese, or Korean. Sample icons:

(Timed)
 (Steady)
 (Teach)
 (Menu)
 (Select)
 (Home)

## Select Display Settings

# 9

The Ultimius is shipped with default settings for the display of language (in English); air pressure (psi); and vacuum (inH<sub>2</sub>O). Skip to step #10 if these display settings are acceptable.

Otherwise, follow these steps to change the display settings:

- From the Home screen, press MENU.
- Press the down arrow to highlight Units of Pressure, Units of Vacuum, or Language.
- Press SELECT.
- Press the down arrow to highlight your choice.
- Press SELECT again to make the change and return to the Home screen.



## Set Clock

# 10

- From the Home screen, press MENU.
- Press the down arrow to select SET CLOCK.
- Press SELECT.
- Use the left/right arrow to highlight the number to change.
- Press the up/down arrow or use the timer (top right knob) to adjust each number. Then use the up/down arrow or timer dial to toggle between AM (morning) and PM (afternoon/evening).
- Press SAVE. This saves the time and returns you to the Home screen.



## Set Dispense Time

# 11

The Ultimius is shipped with all values set to zero. To set dispense time, follow these steps:

- Begin in TIMED mode.
- Press the left/right arrows to select a single number in the time row.
- Press the up/down arrows to set the time.



Once a single digit in the time row is selected, you can also use the timer dial (top right knob) to adjust the dispense time.



Timer knob . . . .

## Set Air Pressure

# 12

Set air pressure by turning the air pressure regulator (bottom left knob).

- Pull the air pressure regulator knob out to unlock it.
- Turn the regulator knob clockwise to reach the correct air pressure setting.
- Push the air pressure regulator knob in to lock the setting.



... Air pressure knob

## Set Vacuum

# 13

During initial testing and setup we recommend that you keep the vacuum setting at 0.0 inH<sub>2</sub>O. After initial testing, set vacuum by turning the vacuum regulator (bottom right knob).

- Pull the vacuum regulator knob out to unlock it.
- Turn the regulator knob clockwise to reach the correct vacuum setting.
- Push the vacuum regulator knob in to lock the setting.



Vacuum knob ...  
↑

## Dispense

# 14

- Purge the dispense tip. From STEADY mode, press the foot pedal until material flows from the tip.
- Return to TIMED mode.
- Press the foot pedal once to begin your next dispense cycle.

**TIP** Hold the tip at a 45° angle to the work surface.



## Helpful Hints

- There are three core variables to the Ultimius: time, pressure and vacuum. Adjust just one of these at a time, in small increments, to achieve your ideal deposit.
- Another important variable is tip size. Choose the right tip for your deposit type. Remember, smaller tips require more pressure and time. Try different tips without changing the time or pressure settings to observe the results.
- Tapered tips reduce the amount of pressure needed to dispense thick materials. They also help prevent drooling at the end of the dispense cycle.
- Use EFD SmoothFlow™ pistons to prevent oozing. Pistons also make barrel loading, dispensing and fluid handling cleaner, safer and more accurate.
- Avoid high pressure (example: 80 psi) with very short time settings (less than 000.0100). The ideal setup matches air pressure and tip size to produce a “workable” flow rate — no splashing but with a time setting that is not extremely low.
- Longer dispense time settings generally provide the highest accuracy.

### IMPORTANT SAFETY INFORMATION

All EFD disposable components, including syringe barrels, cartridges, pistons, tip caps, end caps, and dispense tips, are precision engineered for one-time use. Attempting to clean and re-use components will compromise dispensing accuracy and may increase the risk of personal injury.

Always wear appropriate protective equipment and clothing suitable for your dispensing application.

Do not exceed maximum operating pressure of 100 psi (7.0kg/cm<sup>2</sup>).

Do not heat syringe barrels or cartridges to a temperature greater than 100°F (38°C).

Dispose of components according to local regulations after one-time use.

Do not clean components with strong solvents (e.g. MEK, Acetone, THF).

Cartridge retainer systems and barrel loaders should be cleaned with mild detergents only.

To prevent fluid waste, use EFD SmoothFlow™ pistons.



For EFD sales and service in over 30 countries, contact EFD or go to [www.efd-inc.com](http://www.efd-inc.com)

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