



Nordson Corporation

# OPERATOR'S CARD

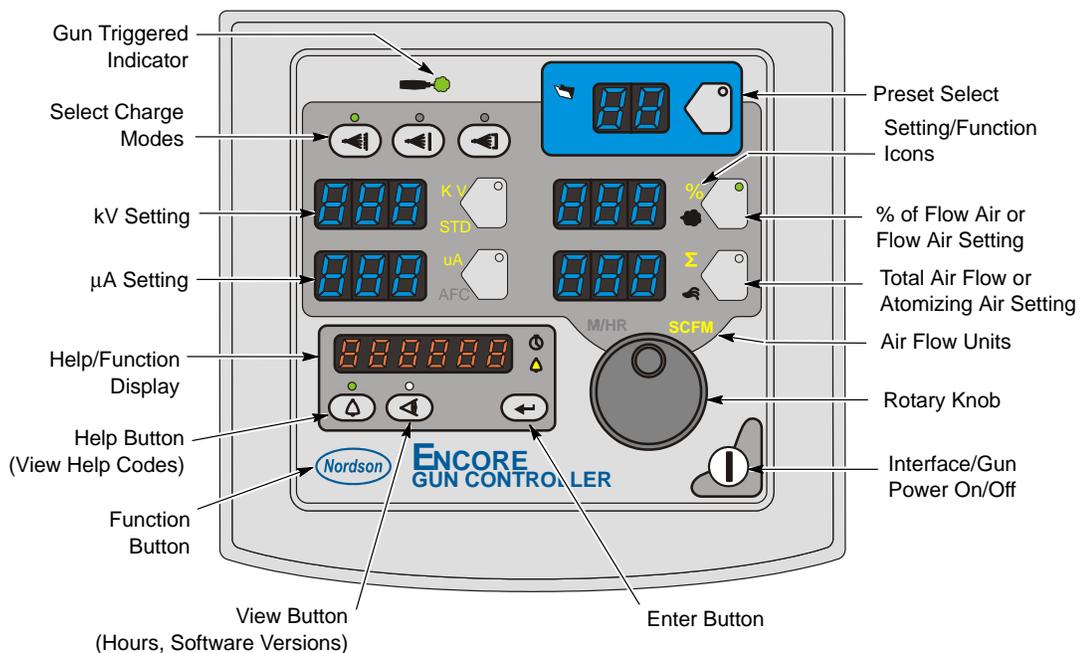
P/N 1088668A02

## Encore Manual Powder Spray System



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

### Controller Interface



#### Turning the Controller On and Off

Use the **Interface/Gun Power Button** to shut off the interface and disable the spray gun.

Use the **Power Switch** on the controller power unit to completely shut off the controller.

#### Changing Settings

To select a Preset or change a setpoint, press the **Preset Select Button** or a **Setting Button**. The button LED lights to indicate that it is selected.

Use the **Rotary Knob** to change the selected value: clockwise to increase the value, counter-clockwise to decrease. The values reset to the minimum if increased past their maximum.

# Preset Settings

Presets are sets of electrostatic and powder flow setpoints. The controller can store setpoints for 20 presets. **To set up a preset, select the preset number, then set the desired setpoint values.**

**NOTE:** When the spray gun is triggered ON you cannot change presets with the settings trigger or the preset button on the interface. You must release the trigger first.

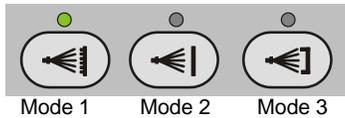
## Electrostatic Settings

Electrostatic output for each preset is set using one of three modes: Select Charge, Custom, or Classic. Refer to *Controller Configuration* on page 4 to select Custom or Classic mode.

### Select Charge Mode

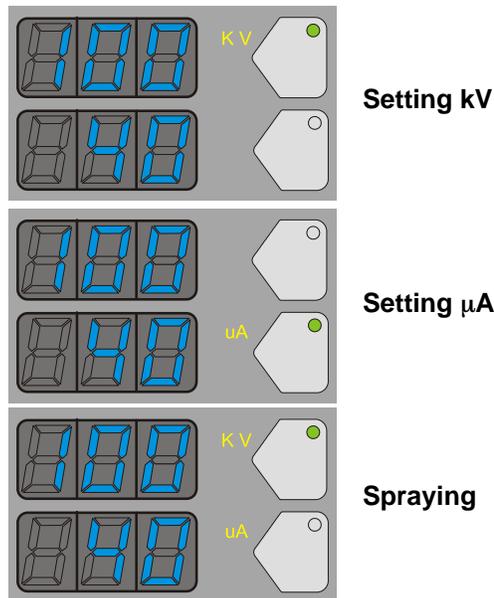
Select Charge modes are not adjustable.

Mode 1	Re-Coat	100 kV, 15 $\mu$ A
Mode 2	Metallics	50 kV, 50 $\mu$ A
Mode 3	Deep Recesses	100 kV, 60 $\mu$ A



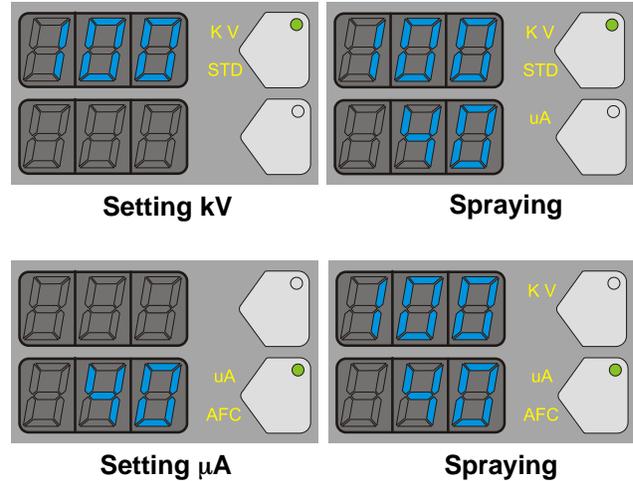
### Custom Mode

Custom mode is the default mode. In this mode, the STD and AFC icons do not light. kV output and  $\mu$ A output limit can be set independently. The default  $\mu$ A range is 10-50  $\mu$ A.



### Classic Mode

In Classic mode, the STD or AFC icon will be lit, depending on which is selected. Select STD to set kV output, or AFC to set the  $\mu$ A output limit.

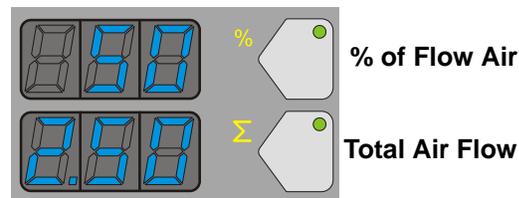


## Powder Flow Settings

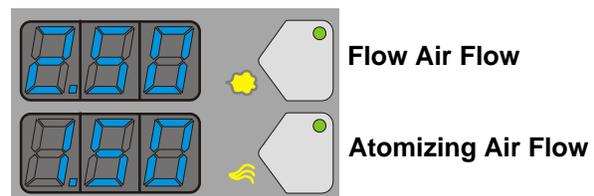
Two modes of powder flow control are available:

**Smart Flow** - This is the default mode. **% of Flow Air** (pump nozzle air) and **Total Air Flow** are adjusted separately. The controller automatically adjusts the atomizing air flow according to the % of Flow Air setting. The Total Air flow setting is in SCFM or M<sup>3</sup>/HR.

**NOTE:** The Total Air Flow setting must be greater than zero to set % of Flow Air, and no powder will be pumped to the gun unless Total Air Flow >0.



**Classic Flow** - Flow air and atomizing air flow are adjusted separately. Settings are in SCFM or M<sup>3</sup>/HR.

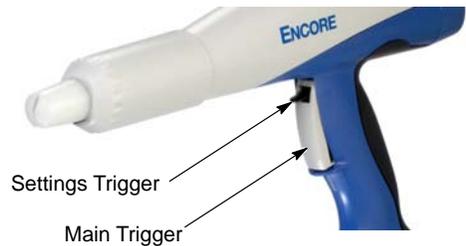
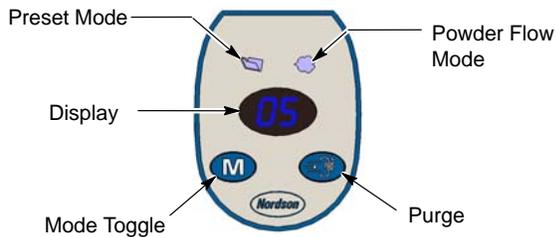


## Factory Set Presets

Preset	Electrostatics, Powder Flow	kV	μA	%	Σ
1	Max kV, 150 g/min (20 lb/hr)	100	30	45	3.0
2	Max kV, 300 g/min (40 lb/hr)	100	30	75	3.0
3	Select Charge 3 (deep recess), 150 g/min (20 lb/hr)	100*	60*	45	3.0
4-20	Program as desired	0	0	0	0

\* Select Charge Mode settings are factory set and cannot be changed.

## Spray Gun Operation



### Normal Operation

The **Mode** button toggles the display and settings trigger function between Preset or Powder Flow.

The **Purge** button purges the gun as long as it is pressed. Only the gun is purged. Disconnect the powder hose from the pump and gun to blow it out.

The **Display** shows the current Preset or the current Powder Flow setting: % of Flow Air in Smart Flow mode, or Flow Air flow in SCFM or M<sup>3</sup>/HR, in Classic Flow mode.

Press the **Main Trigger** to start spraying powder.

Use the **Settings Trigger** up to increase the displayed value and down to decrease. The default trigger function increases or decreases the Preset Number or the Powder Flow.

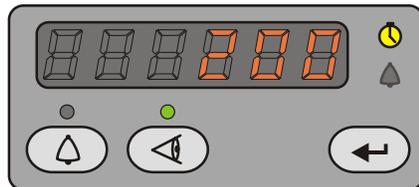
**NOTE:** In Preset Mode, unprogrammed presets (all values set to zero), are automatically skipped when scrolling through the preset numbers with the Settings Trigger.

## Fluidizing Air Operation

**Feed Hopper** - Turning on interface power turns on fluidizing air. Adjust the fluidizing air pressure to 0.3-0.7 bar (5-15 psi), so that powder “boils” gently. Fluidize powder for 5-10 minutes before spraying.

**Vibratory Box Feeder** - Fluidizing air turns on and off when the gun is triggered on and off. Adjust the fluidizing air pressure to 0.3-0.7 bar (5-10 psi), to gently fluidize the powder at the pickup tube.

## Maintenance Hours, Total Hours, Software Versions



The Maintenance Timer is set through the controller configuration functions. It is disabled by default.

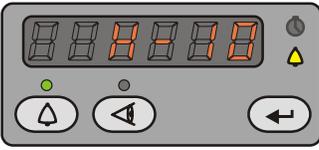
 The Alarm icon lights when the Maintenance Timer runs out, and the Help code H-19 is displayed.

 Press the **View** button and rotate the knob to view in the following order: Maintenance hours, Total operating hours, Gun Controller (GC), Gun Display (Gd), iFlow Module (FL) software version, and Hardware version (Hd).

 The Clock icon lights when the maintenance hours are displayed.

 To reset the Maintenance Timer, press the **Enter** button while viewing the maintenance hours.

# Help Codes



 The Help icon lights if a problem occurs.

 Press the **Help** button to display the Help codes. The last 5 codes are retained in memory. Rotate the knob to scroll through the codes. The display blanks if there is no activity for 5 seconds.

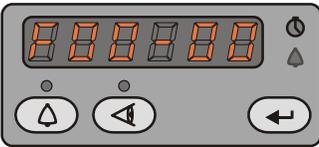
 To clear the codes, press the **Help** button, then scroll through the codes until **CLr** is displayed, then press the **Enter** button.

Refer to your Encore system manual for troubleshooting procedures using these codes.

Code	Message
H07	Gun Open
H10	Gun Output Stuck Low
H11	Gun Output Stuck High

H12	Comm Fault CAN Bus
H15	Over-Current Fault (Cable or Gun Short)
H19	Maintenance Timer Expired
H21	Atomizing Air Valve Fault
H22	Flow Air Valve Fault
H23	Flow Air Flow Low
H24	Atomizing Air Flow Low
H25	Flow Air Flow High
H26	Atomizing Air Flow High
H27	Trigger On During Power Up
H28	EEPROM data version changed
H31	Boost Valve Fault
H32	Gun Air Valve Fault
H33	Fluidizing Air Valve Fault
H34	Purge Air Valve Fault
H35	Vibratory Motor Relay Fault
H36	Comm Fault LIN Bus
H41	24V Fault
H42	Power Supply Fault
H43	µA Feedback Fault

# Controller Configuration - Function Codes



 Press the Function button for 5 seconds to display Function codes. Refer to your Encore system manual for additional configuration codes.

**F00:** Function Code    -    **00:** Code Value

1. Use the rotary knob to scroll through the Function codes.
2.  Press the **Enter** key to select a Function Code and change the focus to the code value. The code value starts blinking.
3. Use the rotary knob to scroll through the code values.
4.  Press the Enter key to save the displayed code value and return the focus to the function codes.

Code	Function	Values	Default
F02	Display Units	00=SCFM, 01=M <sup>3</sup> /HR	00
F03	Electrostatic Control	00=Custom, 01=Classic (STD, AFC)	00
F04	Powder Flow Control	00=Smart, 01=Classic	00
F06	Vibratory Box Delay Off	on, 00-90 seconds (on=continuous)	30
F07	Maintenance Timer	00=Disable, 00-999 hours	00
F15	Save/Restore/Reset	00=System Save, 01=System Restore, 02=Factory Reset	00
F16	Gun Display Brightness	00=Low, 01=Medium, 02=High	01
F17	Number of Presets	01-20 (select number available on interface and gun)	20

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