FAIRBANKS®
S C A L E S

PREDICTIVE CUTOFF
APPLICATION FOR FB4000 INSTRUMENTS

Flexibility and accuracy for filling and batching applications.

Fairbanks.com

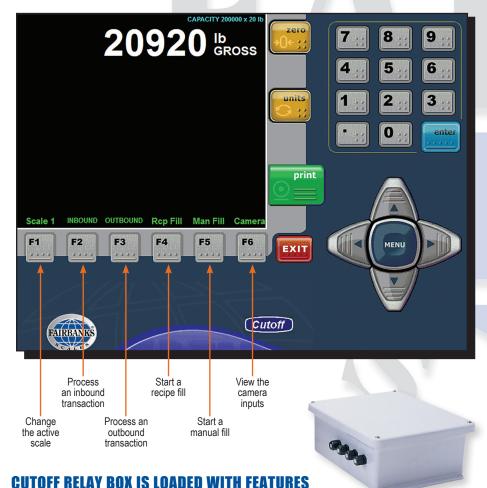# PREDICTIVE CUTOFF
APPLICATION FOR FB4000 INSTRUMENTS

ACHIEVE GREATER ACCURACY WITH PREDICTIVE CUTOFF FLOW MONITORING

The Predictive Cutoff Application for the FB4000 is a flexible and robust filling, batching, and weighing solution. Capable of controlling the flow of up to a dozen different materials and storing recipes with up to four materials each, the Predictive Cutoff Application will allow processes to flow seamlessly between operations.

Typical filling applications turn off the flow of materials when a specified setpoint weight has been reached. With Predictive Cutoff, the FB4000 is constantly monitoring the rate of weight change on the scale and predicts the value between displayed (on-screen) updates. If the setpoint will be reached between updates, the FB4000 does not wait to stop the flow. This results in more accurate filling weights, saving time and expense, whether filling a single material or batching precise combinations. Built on a Windows® operating system, information from the FB4000 is easy to integrate into other operational reporting systems and the instrument can connect to any Windows® compatible USB or network printer.

Combined In/Out Filling modes for mixed use scales

Change the active scale

Process an inbound transaction

Process an outbound transaction

Start a recipe fill

Start a manual fill

View the camera inputs

CUTOFF RELAY BOX IS LOADED WITH FEATURES

With up to 16 I/O ports, the Fairbanks Relay Box accessory for Predictive Cutoff has the flexibility to run most automated filling apps.

- Use the input modules to add interlocks.
- Add a remote start button.
- Control up to 12 materials at a single rate or six materials with two speeds.
- Connect to the Fairbanks FB4000 Instrument through an existing Ethernet TCP/IP network or directly with patch cables and an Ethernet switch.

SCREEN SAMPLES

Material Entry screen

Each material can be assigned up to two relays, for a fast and dribble feed.

CUTOFF RECIPES

Material ID	008
Description	Portland Cement
Fast Feed Relay	Module 2 — Channel 0
Dribble Relay	Module 2 — Channel 1
Dribble	1500
Preact	260

* The use of Channels 0 - 3 match the OPTO22 relay literature. Channel 0 triggers the Port 1 LED on the relay ... Channel 3 triggers the Port 4 LED.

Recipe Entry screen

Recipes can contain up to four materials or drafts. Save as many recipes as you need.

CUTOFF RECIPES

Recipe	CONCRETE
Material Count	4
Material	1 of 4
Material #1	008
Portland Cement	
Target	20000
Dribble	1500
Preact	250

Draft Weights
No. Drafts	1
Draft 1	20000
Draft 2	0
Draft 3	0
Draft 4	0
Target	20000

Interlock Entry screen

Use the input module to add safety interlocks, such as remote start and emergency stop.

CUTOFF RECIPES

SNAP I/O Module	Module 0
Interlock #1	Channel 0
Interlock #2	None
Interlock #3	None
Interlock #4	None
Remote Start	Channel 3
Alarm Output	Module 1 — Channel 3

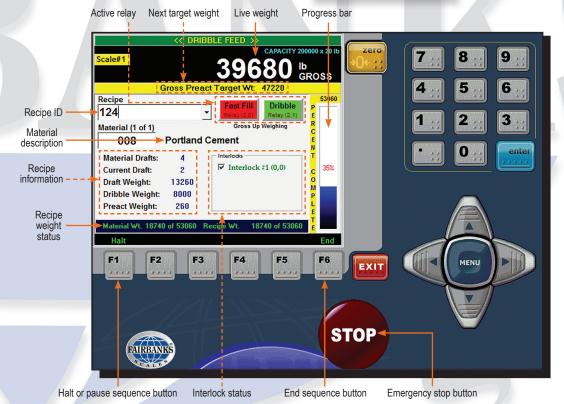# FILLING PROCESSES GRAPHICALLY DISPLAYED FOR OPERATOR

The FB4000 filling screen contains all the information users need to monitor the status of the current filling operation. In addition to live weight, the recipe and material names are displayed along with the weight information for the recipe. A progress bar provides a visual guide to the status of the operation. The status of all Interlocks and the active relays are displayed so that there are no surprises to the operator and, in case of emergency, a prominent on-screen E-stop button is displayed.

FB4000 Instruments are legal-for-trade!

FILL SCREEN

Active relay   Next target weight   Live weight   Progress bar

<< DRIBBLE FEED >>

Scale#1   CAPACITY 200000 x 20 lb   zero

39680 lb GROSS

Gross Preact Target Wt: 47220

Recipe ID → Recipe **124**

Fast Fill Relay (2.0)   Dribble Relay (2.1)

Gross Up Weighing

53060

Material description → Material (1 of 1) 008 **Portland Cement**

Recipe information:
Material Drafts: 4
Current Draft: 2
Draft Weight: 13260
Dribble Weight: 8000
Preact Weight: 260

Interlocks
☑ Interlock #1 (0,0)

PERCENT COMPLETE   35%

Recipe weight status → Material Wt. 18740 of 53060   Recipe Wt.   18740 of 53060

Halt   End

F1 F2 F3 F4 F5 F6   EXIT   MENU

STOP

Halt or pause sequence button   Interlock status   End sequence button   Emergency stop button

FB4000 SERIES *INSTRUMENT ADVANTAGES*

- Unsurpassed data collection capabilities
- Unsurpassed data storage capabilities
- Multiple communication options
- Touch screen operation
- Ethernet connectivity
- Email functions
- IP Camera interface
- Built-in error reporting

Predictive Cutoff Application is ideal for controlling a variety of industrial filling operations

Grain loading truck or rail cars

Cement mixing/filling

Asphalt mixing/filling

Food & beverage batching processes

Aggregate loading/hauling

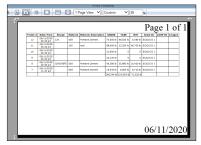Tank or hopper filling

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PREDICTIVE CUTOFF TOP FEATURES

- Recipe storage for easy management.
- Ethernet TCP/IP relay box interface.
- Up to 16 configurable I/Os.
- Error notifications.
- Customizable reports.
- Safety interlocks.
- Formattable tickets.

Predictive Cutoff simplifies filling operations.

REPORTING OPTIONS

The Predictive Cutoff Application has the ability to print, export or email configurable reports that show a variety of weighment information.

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Printed Report Format Sample

On-screen Report Format Sample

PREDICTIVE CUTOFF SPECIFICATIONS

Ticket formatting . . . . Customizable
Reports. . . . . Six unique reports, fully configurable
Error reporting . . . . Automatic alerts sent to multiple email accounts during an error event
Automated images . . . . During the weighing process
Number of materials. . . . . Up to 12
Materials per recipe . . . . Up to 4
Number of drafts. . . . . Up to 4 in single material recipes, 1 with multiple materials recipes
Accessories . . . . Relay box

RELAY BOX SPECIFICATIONS

I/O. . . . . 4 digital inputs standard, up to 12 additional inputs and outputs
Outputs. . . . . Dry-contact or digital
Interface . . . . Ethernet TCP/IP
Power requirements . . . . 93-130 VAC; 47-63 Hz
Dimensions. . . . . 15.4" x 13.4" x 6.0"

FB4000 SERIES INSTRUMENT DIMENSIONS

Desktop Enclosure

5.59"
14"
15.25"

CUTOFF RELAY BOX DIMENSIONS

13.40"
6"
15.40"

INSTRUMENT SPECIFICATIONS

Model . . . . FB4000 Series Instrument with Predictive Cutoff Application
Display . . . . 10.4" Color SVGA - 600 x 800
Memory. . . . . 4 GB RAM
Processor . . . . Dual core, 1.86 GHz
Storage. . . . . 32 GB CFast drive
Enclosure . . . . Stainless steel, powder coated, NEMA 12
Device platform . . . . Windows® 8.1 embedded
Outputs. . . . . 4 USB 2.0 ports
2 RS232 Serial ports
1 RS232/485 selectable port
1 RJ45 port for network connection
1 HDMI port
10/100/1000 Mbps Ethernet controller
Power requirements . . . . 100 to 130 VAC or 200 to 260 VAC; 50/60 Hz ± -2 Hz
Touch Screen interface . . . . Standard
Load cell interface options . . . . Analog and/or Intalogix®
Clock. . . . . Real time clock, day of the week, 12-hour AM/PM, date month/day/year
Display resolution . . . . 10,000 divisions commercial 50,000 divisions for non-commercial
Capacity . . . . Programmable to 999,999
Displayed units . . . . 7 primary and 7 secondary
Humidity . . . . 0 to 100%
Accuracy. . . . . Class III/IIIL
Number of weighing platforms . . . . Up to 8, depending on the scale interface(s) used
Approvals . . . . NTEP CC# 15-064 MC# AM-5997

Your Fairbanks Scales Authorized Representative is: