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FROM: Ryan O'Toole – Instrumentation Product Manager

SUBJ: FB1200 Instrument Release

The Fairbanks Product team is excited to announce the release of the FB1200 instrument. This industrial scale instrument offers the flexibility and features required by modern weighing operations in rugged and economical package. In the following pages you will find the answers to some of the questions that may be asked about this exciting new release.



Both models of the FB1200 are available for order immediately. Both enclosure types will begin shipping from the factory on Monday August 2, 2021.

If you have any questions, concerns, or comments feel free to give me a call at 816-663-8526 or by e-mail to rotoole@fairbanks.com.

What is the FB1200?

The FB1200 is the newest instrument to be added to the Fairbanks Industrial Scale Catalog. This analog-only scale instrument is designed to be used with floor scales, bench scales, and weighing assemblies from any manufacturer. With a large, easily visible backlit, 9-segment LCD display and rugged exterior the FB1200 is built to thrive in rough warehouse and manufacturing environments where accurate and consistent weights are vital to customer success.

The simple, seven-key interface has oversized buttons for Units, Zero, B/G Net, Tare, and Print as well as a single function key to access the more advanced features of the instrument.

While many industrial applications do not require legal-for-trade status from their weighing equipment, the FB1200 is approved for 10,000 divisions by both NTEP and Measurement Canada (MC). This allows the FB1200 to provide legal-for-trade weights when the situation requires it.

What enclosures are available for the FB1200?

Two enclosure options are available for the FB1200: A sturdy, NEMA 4 ABS/Polycarbonate Resin Alloy enclosure and a NEMA 4X stainless steel Alloy enclosure.



What does it mean to have a NEMA 4 or NEMA 4X rating?

NEMA 4 and NEMA 4X both offer protection from dust and liquid intrusion and are rated for indoor/outdoor use. Both FB1200 models protect the internals from dirt, rain, and low pressure water spray in all environments. NEMA 4X offers additional corrosion protection over NEMA 4 rated enclosures, making the stainless steel enclosure the choice for environments containing caustic materials or otherwise damaging vapors or liquids.

Can the FB1200 resin alloy enclosure be placed in wet or dusty environments?

As a NEMA 4 rated enclosure, the FB1200 resin alloy can be placed in environments where it will encounter low pressure water flow without placing the internal electronics at risk. This includes splashing water, drips, or sprays like a standard garden hose.

The NEMA 4 rating also indicates strong protection from dust and granule entry, protecting the internals of the FB1200 in dirty environments.

What are the mounting options for the FB1200?

Both enclosure types ship standard with a wall/desk mount stand installed. The stainless steel enclosure ships with a stainless steel stand.

While early shipments of the Resin Alloy enclosure will ship with stainless steel stands at no additional charge, later orders will ship with a Resin Alloy stand. Stainless steel stands will be available as optional upgrades for the Resin Alloy units once the change is made. A field notification will be made before this transition occurs.

What operations can the FB1200 address?

In addition to simple weighing operations, the FB1200 has feature sets to address the following types of operation:

- Piece Counting – Enter the piece count of a sample through the front panel and use the FB1200 to calculate the count of any size sample.
- Accumulation – Accumulate gross weight, net weight, and piece count values over repeated weighments.
- Checkweighing – Three-zone checkweighing can be used to confirm a weight is within an acceptable range. The FB1200 can communicate the active zone through the front panel or as a digital output.
- Livestock weighing – Use the livestock filter to calculate the weight of a single animal or a group.
- Peak Hold – Hold the highest stable or unstable weight, even when the weight is removed.

How does the FB1200 Accumulate weights?

The FB1200 has two accumulation modes, manual and auto. Manual accumulation allows the operator to select weights that will be added to the totals. Auto accumulation will add the weight on the scale to the totals any time a ticket is printed, whether that happens automatically or because the operator has pressed the PRINT key.

Gross weight and net weight are accumulated, recorded, and reported separately. Both totals can be displayed and appear on the standard accumulation printout. One or both values can be added to custom ticket formats. An example of the standard ticket can be found on page 6 of this document.

In addition to the net and gross weights, pieces can be accumulated if a piece weight has been entered.

How does the FB1200 count pieces?

The FB1200 has two options for establishing average piece weight. Piece weight can be determined by calculating the average of a known sample. This weight can be used to calculate pieces or additional pieces can be added to the samples to make corrections to the average

piece weight. This resampling allows larger sample sizes to be used with no additional hand-counting.

Once a piece weight is calculated, pieces on the scale can be calculated by gross or net weight, printed, and accumulated.

Piece weights can be printed on the standard ticket format or added to custom ticket prints. An example of the standard ticket can be found on page 7 this document.

What peaks can the FB1200 record?

The FB1200 can retain either stable or unstable peak weights. When peak hold is enabled, it runs constantly in the background. The recorded peak at any time can be viewed or printed to a default or custom ticket. An example of the standard ticket can be found on page 7 of this document.

What communication options are present in the FB1200?

The FB1200 has one RS232/20mA port and one RS232/RS485 port. RS232 communication is bi-directional, while 20mA and RS485 are transmit only.

The FB1200 contains several scale-industry standard continuous outputs, as well as custom continuous outputs to connect to almost any PC software that requires serial weight data. Similarly, tickets can be formatted to match the needs of the customer operation.

The FB1200 can be connected to a 1600 Remote Display and with either RS232 port or the 20mA output with the Fairbanks standard remote display output.

How is the FB1200 configured?

In addition to the front panel configuration and calibration that all Fairbanks technicians will be familiar with, the FB1200 is the first Fairbanks instrument able to be configured and calibrated through an optical communication port on the front of the enclosure.



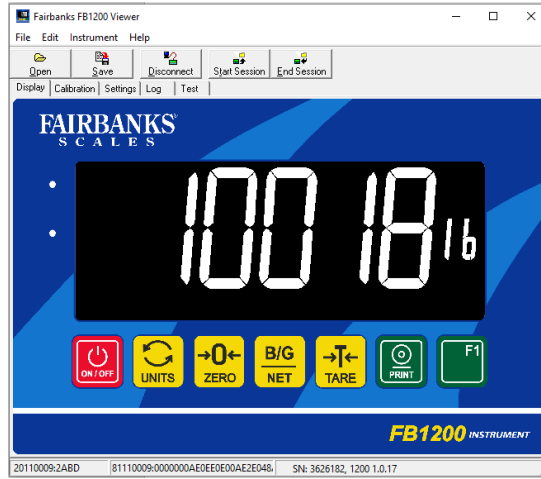
FB1200 Optical Port

The optical communication port connects the FB1200 to the PC utility through a laptop's USB port. Once the utility is connected, the menu can be read and modified in real time and the effects can be seen immediately in the instrument.



Tech-Lynk attached

This PC utility also allows for configuration and calibration settings to be downloaded to the technician's laptop, greatly reducing the time needed to recreate the settings for larger operations.



How is the FB1200 Viewer different from other methods of PC-based configuration?

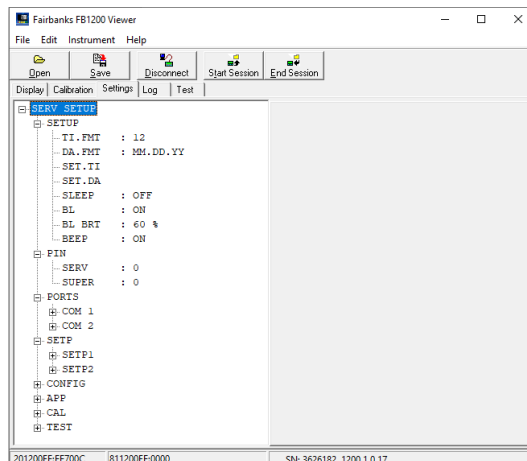
PC configuration of the FB1200 is performed through the FB1200 Viewer. Connection between the PC and the instrument can be made through the FB1200 serial port or the optical connection on the front panel of the instrument. Using the optical connection allows the FB1200 Viewer to be connected without requiring the instrument enclosure to be opened.

Optical connection to the FB1200 is made using the Tech-Lynk cable accessory. The Tech-Lynk connects to the FB1200 using a magnetized head with two optical communication channels and to a technician's laptop via USB A connector. The Tech-Lynk accessory is sold separately and can be found in the Nexus product catalog.



Unlike the PC225X utility, which required configuration files to be passed back and forth to configure and test the instrument, the FB1200 Viewer reads configuration items from the instrument's registers and can write new settings to them directly. The change takes effect at the instrument and can be tested immediately. Because of the ease of connection and the immediate response, the FB1200 viewer allows for extremely fast configuration of the instrument and is the recommended method of configuring and FB1200.

The FB1200 Viewer is free to all Fairbanks technicians and authorized distributors. The download file for the Viewer can be found on the FB1200 Intranet Product Page under Sales & Service Tools.



Configuration settings can be downloaded onto a PC and the file can be used to instantly configure any other FB1200 with the same arrangement. Calibration data can also be loaded into an instrument, reducing the configuration time to configure identical instruments to nearly zero.

What calibration methods are there?

Zero/Span Calibration

Like the existing Fairbanks industrial product line, the FB1200 can be calibrated by establishing a zero reference and using known weight to determine the span.

10-Point Linearization Calibration

In addition to single-point span calibration, the FB1200 can measure up to nine additional reference points for a total of 10 linearization points. This allows the technician to correct for non-linearity in the load cell(s).

Direct mV/V Calibration

Once the dead load and full scale mV/V values of a scale are known, they can be entered as calibration values directly into the FB1200. This allows for the quick replacement of instruments that are damaged beyond use on otherwise functioning scales without requiring a new span to be established with test weights.

How is the FB1200 calibrated?

All three calibration options can be used through either the front panel or the FB1200 Viewer. Using the FB1200 Viewer allows for the instruments to be quickly configured and calibrated with any method, reducing time to place scales back in use.

Can the FB1200 be used with a tape or ticket printer?

The FB1200 can be combined with a U295, U590, or U220 printer to provide printed weight information. Default formats are available for Gross-Tare-Net weighing as well as application features.

Gross-Tare-Net weighing	<pre>000000133 02/01/21 12:19:56PM 12.001b GR 5.001b TA 7.001b NT</pre>
Accumulation	<pre>02/08/21 12:03:48PM 3 Items GR 13.5001b GR Total 2 Items NT 9.5001b NT Total</pre>

<p>GTN weighing and piece count</p>	<pre>000000138 02/01/21 12:27:50PM 12.001b GR 5.501b TA 6.501b NT 140 p 0 p Total</pre>
<p>GTN weighing and peak weight</p>	<pre>000000134 02/01/21 12:23:59PM 12.001b GR 5.501b TA 6.501b NT 12.721b Peak Weight 02/01/21 12:22:30PM</pre>
<p>Accumulation with piece count</p>	<pre>02/08/21 12:16:33PM 3 Items GR 16.501b GR Total 2 Items NT 13.001b NT Total 57 p Total</pre>

Will the FB1200 match print a customer’s custom ticket format?

The FB1200 Viewer features a drag-and-drop interface for developing custom tickets. These custom tickets can include text fields, weight information, and status indicators to supply a wide range of information. Fields can be located to match locations on customer’s preprinted tickets.



Custom tickets formatting can only be accomplished using the FB1200 Viewer utility.

Can the FB1200 print labels?

Both the GC420d and the L540 label printers are compatible with the FB1200. Five 2" x 4" label templates and ticket formats can be found on the Intranet product page for each printer. Additional label sizes and formats are available through Solutions.



Does the FB1200 include Digital I/O?

Yes! Unique among the Fairbanks industrial instruments, the FB1200 contains two digital inputs and two digital outputs to be used in a variety of ways to meet the needs of an application.

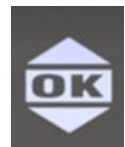
The digital inputs can be used as remote switches for any of the front panel keys, or to reset the digital outputs. The inputs are designed for switch contacts.

The digital outputs can be used to indicate overweight/underweight conditions, checkweigh statuses, or scale status information. They are isolated high-side drivers requiring an external 12-24 VDC power source. Each output has a 400 mA drive capacity.

What can be done with the FB1200 setpoints?

The FB1200 has 12 setpoint types for a range of applications.

- Off – Setpoint is off
- On – Setpoint is on when the instrument is turned on
- Over – Setpoint is active when the weight is over a selected value
- Under – Setpoint is active when weight is under a selected value
- COZ (Center-of-Zero) – Setpoint is active when the scale is at center of zero
- Zero – Setpoint is active when the FB1200 displays zero
- Net – Setpoint is active when the displayed weight is net
- Motion – Setpoint is active when the scale is in motion
- Error – Setpoint is active when an error condition is present
- C.W.HI, C.W.OK, C.W.LO – Setpoint will be active when the weight is in the selected checkweigh zone



These setpoints can be tied to digital outputs as well as visual or audible alarms.

My customer loves the FB1100 display, is the FB1200 the correct replacement?

The FB1200 features the same 2" character size that has made the FB1100 popular and improves it with an inverted white-on-black display for easy viewing. The adjustable backlight intensity allows the instrument to be viewed clearly in a range of light conditions.



Motion, zero, net weight, and function specific indicators are also present in the inverted scheme, so all operating information is available and clearly visible at a glance.

Can the FB1200 be used as a remote display?

Many customers love the large character size of the FB1200. To leverage this feature, the FB1200 has been designed to act as a remote display for many other Fairbanks instruments. The FB1200 can be used as a remote display for the FB2255, FB2560, FB60XX, and FB7100 instruments. In addition to displaying the weight, the FB1200 can send select remote commands to the master instrument. Depending on the master instrument, these remote commands include:

- Units
- Zero
- B/G Net
- Tare
- Print

How is the FB1200 powered?

In whatever manner the customer needs! The FB1200 arrives from the factory with a 110 VAC power cord installed but can be easily rewired in the field to accept 220 VAC or 12-24 VDC power input.

For scales on the move, the FB1200 has a field-installed battery option. Two lithium-ion batteries can be recharged by plugging the instrument into a wall outlet. Battery status indicator on the display means never being surprised by a dead battery.

Why does your customer want the FB1200?

The FB1200 has the competitive features required to be the go-to solution for all manner of manufacturing and logistics operations. This includes customers who:

- Need to view or print gross only or gross/tare/net weights.
- Need to stream weight to a PC over a serial port.
- Use piece counting and accumulation features for inventory control.
- Peak hold for stress testing materials.
- Animal weighing
- Use checkweighing for quality control.
- Require minimum downtime in their operation.

What is Fairbanks trying to accomplish with the FB1200?

The economical price point and the comprehensive feature set will allow the FB1200 to carve out market space on the lower end of industrial applications.

The FB1200 expands the ability to address customer needs by including digital inputs and outputs, multiple weighing intervals, while significantly decreasing the time needed to install and service industrial instruments.

Where can I find instructional videos for the FB1200?

The Intranet Product page has instructional videos for the FB1200 addressing the following topics:

- Connecting to the FB1200 Viewer
- Configuring through the Viewer
- Calibrating through the Viewer
- Accumulation
- Checkweighing
- Connecting to a remote display
- Using Piece Counting
- Using setpoints
- Using Peak Hold
- Continuous output string building
- Custom ticket formatting
- Using the FB1200 as a remote display

Check the Intranet Product Page regularly, as additional videos will be added.

Instrument Comparisons

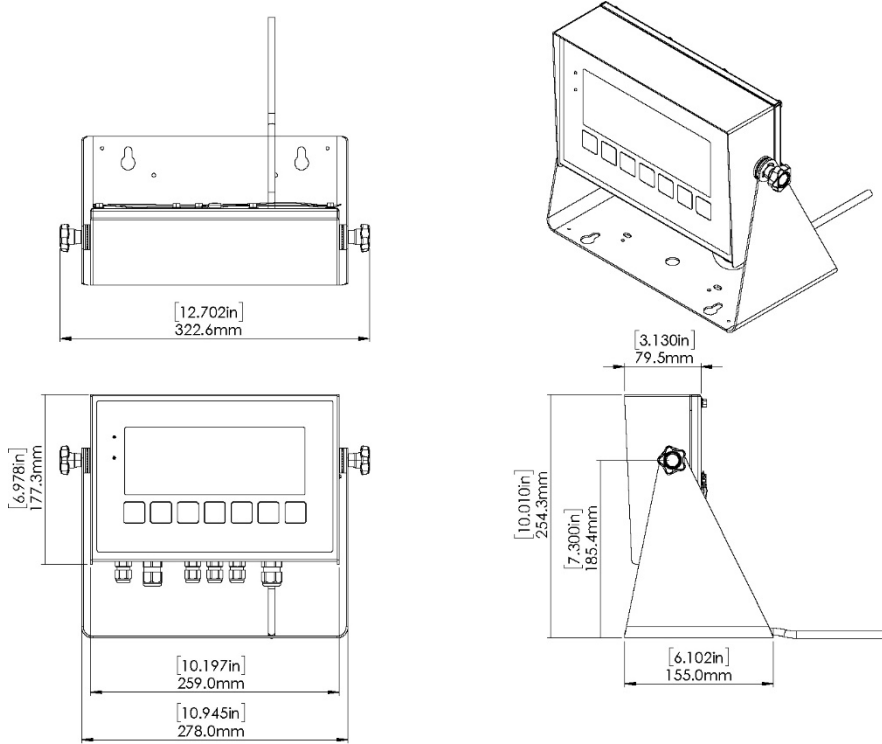
Feature	FB1200	FB1100	FB2250	FB2255
Tech-Lynk	Yes	No	No	No

Alphanumeric Display	Yes	No	No	No
2.0" Weight Characters	Yes	Yes	No	No
Rechargeable Battery	Yes	Yes	No	No
Category 2 Physical Seal	Yes	No	Yes	Yes
Audit trail	Yes	No	No	No
Six Units (lb, oz, ton, kg, g, metric ton)	Yes	No	No	No
Three Active Units	Yes	No	No	No
Gross/Net Accumulation	Yes	No	Yes	Yes
Multiple Linearity Calibration point	Yes	No	Yes	Yes
Direct mV/V Calibration	Yes	No	No	No
Password Protection	Yes	No	No	No
Configurable Set Points	Yes	No	No	No
Configurable Inputs	Yes	No	No	No
Multiple Programmable Print Formats	Yes	No	No	No
Configurable Serial Output	Yes	No	Yes	Yes
Multiple Range (3 ranges maximum)	Yes	No	No	No
Multiple Interval (3 intervals maximum)	Yes	No	No	No
Peak Hold	Yes	No	Yes	Yes
Livestock Filter	Yes	No	Yes	Yes
Counting Feature	Yes	No	Yes	Yes
Basic Checkweighing	Yes	Yes	No	No
Auto Tare	Yes	No	No	No
Auto Print	Yes	Yes	Yes	Yes
Remote Display Mode	Yes	Yes	Yes	Yes

Specifications

Display	2" six-digit, nine-segment LCD with backlight
Keys	On/Off, Units, Zero, B/G Net, Tare, Print, F1
Power	100-240 VAC, 50-60 Hz or 12-24 VDC
Battery	Optional rechargeable battery accessory
Enclosures	NEMA 4 ABS/Polycarbonate Resin Alloy or NEMA 4X Stainless Steel
Mounting	Desk/Wall mount included for both models
Communication Ports	Com 1: Bi-directional RS232/transmit-only 20mA Com 2: Bi-directional RS232/transmit-only RS485
Digital I/O	(2) inputs and (2) outputs
Load Cells	(8) 350 ohm cells
Excitation Voltage	5 V
Graduation Size	Selectable from 0.0001 to 100
Multi-Interval	Up to 3 intervals
Multi-range	Up to 3 ranges
Units	lb, kg, T, tonne, oz, g, lb oz
Temperature Rating	14° – 104° F
Filters	4 settings
Approvals	NTEP, MC

FB1200 Stainless Steel Dimensions



FB1200 Resin Alloy Dimensions (shown with Resin Alloy mounting bracket)

