FCB PINNACLE

2 and 4 Flavor

Operator's Manual

FCB - 2 Flavor

FCB - 4 Flavor

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CONTACT INFORMATION

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. Appropriate safety precautions should be followed and all local safety and construction requirements should be met.

To inquire about current revisions of this and other documentation, or for assistance with any Cornelius product contact:

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CYLINDER STATUS LIGHT

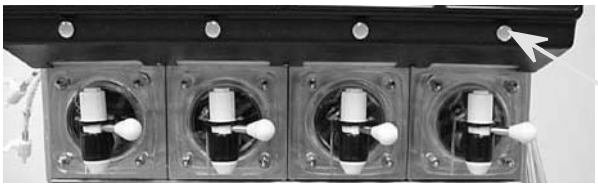

FIGURE 1

The light above the dispensing valve indicates the status of that dispensing cylinder (see Figure 1). The different lights and their meanings are:

Light	Status	Action
No light	Unit ready for normal operation.	Dispense product.
Solid red	Unit is in defrost mode or has not reached serving viscosity after defrost.	Do NOT dispense product until red light is out.
Blinking green	Error condition on that cylinder.	Check Control Panel.
Blinking red and green	Syrup Sold Out error.	Replenish syrup supply.

REPLENISHING SYRUP SUPPLY (SYRUP SOLD OUT)

Bag-In-Box System:

1. Replace the empty BIB.
   - Wait for the syrup error to automatically clear.
2. If the barrel is not full, fill it by opening the pressure relief valve on the face plate. Keep the valve open until the liquid reaches the top of the barrel.
3. The display for the barrel that was out of syrup will change from SYRUP to ON.
4. Ready to serve in 5 to 7 minutes.

Tank System (Need to add kit part # 629087516 to accommodate Tank System.):

1. Remove the empty syrup tank by disconnecting the syrup tube first, then the CO_2 tube.
2. Rinse the disconnects in warm water to remove any syrup residue.
3. Move a full Syrup tank into position and connect the CO_2 tube first, then the syrup tube.
4. Return to Barrel Status menu, press SYRUP. The cylinder will automatically prime itself.
5. If the barrel is not full, fill it by opening the pressure relief valve on the face plate. Keep the valve open until the liquid reaches the top of the barrel.
6. The display for the barrel that was out of syrup will change from SYRUP to ON.

NOTE: If the blendonator has not started filling after 15 seconds, press SYRUP again.

DAILY CLEANING

Wash external surfaces with mild soap solution, rinse with clean water, and wipe dry. Remove the drip tray (if applicable), wash with mild soap solution, rinse, and dry.

NOTE: Do not use abrasive cleaners on the unit.

MAINTAINING PRODUCT QUALITY
CORNELIUS FCB EQUIPMENT - OPERATOR INSTRUCTIONS

It has been determined that the following factors can affect the rate at which product quality diminishes (as indicated by a change in product appearance).

1. Dispensed Product Throughput
2. Programmed Defrost Scheduling
3. Viscosity Setting

Cornelius recommends the following instructions be read and followed relative to operating and establishing settings with the FCB equipment. Cornelius equipment service manuals contain instructions on how to program settings within the control system. Operators who have not been trained on servicing Cornelius FCB equipment should not attempt to modify equipment settings but should contact an accredited service provider.

Cornelius makes the following recommendations to help assure maximum product quality:

1. Dispensed Product Throughput

FCB equipment is designed to provide a high throughput of frozen carbonated dispensed product to meet peak draw demands. Where low product throughput is experienced, there is the potential for product quality to diminish. The matrix below outlines the minimum throughput per barrel that must be dispensed on a 24 hour basis.

Dispensed product throughput matrix[1]

Pinnacle	Viscosity </= 4	Viscosity >4
Volume of dispensed product per barrel per 24 hours required to maintain product quality.	48 oz	60 oz

Cornelius recommends that, in conditions where the FCB machine is operational and the minimum throughput (set forth in the matrix above) is not met on a per barrel basis, product should be dispensed and discarded to increase throughput and help assure that product quality is maintained.

2. Programmed Defrost Scheduling

The control system in Cornelius FCB equipment includes a function to automatically defrost product in the barrel at programmed times. Programmed defrosts must be scheduled frequently to ensure that product quality within the barrel is maintained. Failure to defrost regularly during periods of low throughput will allow increased ice crystal growth, with a possible decrease in product quality and will cause drive errors. Regular throughput of dispensed product will replenish the barrel frequently with liquid and reduce the requirements of programmed defrosts.

Cornelius recommends that programmed defrosts be scheduled to occur during any 3 hour window during which time dispensed product throughput is low. Low throughput is defined as less than 8 x 16oz drinks per barrel during any 3-hour window.

1. Data in matrix assumes equipment has been correctly installed, commissioned and calibrated as per directions contained in all technical literature published by Cornelius and the recommendations contained in this document have been followed.

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3. Sleep Mode Recommendations

Cornelius recommends programming a sleep for any period of time, over 3 hours, in which the unit will not have any usage. If the programmed sleep is longer than 6 hours, Cornelius also recommends turning the ice bank off in the options menu. This will increase the life of the machine and reduce the energy consumption.

A wake time must be programmed to return the unit to normal operation. Cornelius recommends programming the wake 30 minutes before the unit is needed if the ice bank option is set to ON and 60 minutes before the unit is needed if the ice bank option is set to OFF. These are the time recommended if the ambient temperature is at 75^{o}F. The times will vary depending on the ambient temperature (a higher ambient temperature require more time for the ice bank to build.

4. Viscosity Setting

The control system in Cornelius FCB equipment includes a function to select the desired product viscosity. This function is referred to as "Viscosity Setting". There is a selectable Viscosity range is 1–9 for the Pinnacle. The higher the number selected the more viscous the frozen product in the barrel will become. This increased viscosity is achieved by freezing the product in the barrel to a lower temperature thereby increasing ice crystal size/growth. As the ice crystal size increases, however, there is potential for product quality to diminish.

Cornelius recommends that the viscosity settings be set at the lowest possible setting to achieve the desired drink quality. In most typical installations using a sugar-based syrup, acceptable drink quality can be achieved by programmed Viscosity Settings in the range of 3-5 for Pinnacle.

Diet FCB syrups freeze much more readily than sugar based syrups, so the Viscosity Setting should be selected at the minimum value available (which is 1 for Pinnacle equipment).

Control Panel

Control Panel Overview

The Pinnacle is controlled by a microprocessor that monitors and controls the major systems and components of the machine. The microprocessor is pre-programmed at the factory to perform the tasks necessary to keep the Pinnacle operating correctly. The microprocessor keeps track of diagnostic information that is used when adjusting and/or repairing the machine.

Error messages are displayed on the Control Panel located behind the lighted merchandising panel (see Figure 2). There are two levels of Control Panel access: one used by the operator for normal operations, and one used by qualified service technicians for installation and service functions.

FIGURE 2

The Control Panel has many different displays of information called Menus. The first menu (menu 1) that is displayed is the BARREL STATUS menu. From each menu there is a button to return to the previous menu and another button to advance to the next menu (if applicable).

Control Panel Description

Control Panel Display

The Control Panel display has two main areas. The first area on the control panel presents information about the status and settings of the machine (see Figure 3). It also displays menus for actions that are taken to change the functioning of the machine.

Control Panel Buttons

The second area on the control panel is the button area. There are five buttons that are pressed to activate various functions of the microprocessor. Each button has a label directly above it that describes what happens if that button is pressed (see Figure 3).

Pressing a button performs the action labeled just above the button.

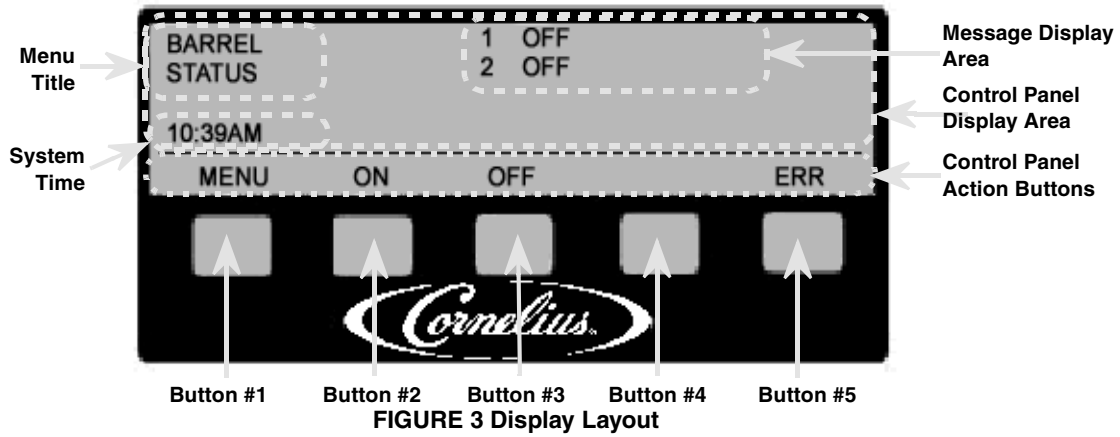

FIGURE 3 Display Layout

Menu 1 — BARREL STATUS

The Barrel Status menu is the main control panel menu. This menu displays the system clock and the present status of each cylinder (see Figure 4).

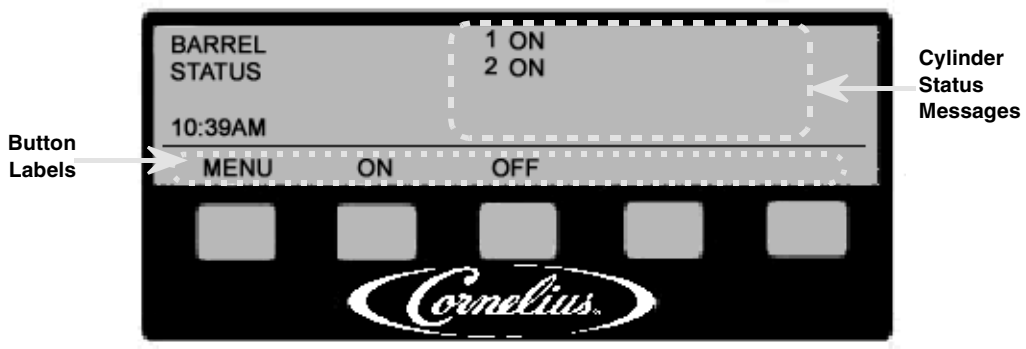

FIGURE 4 Barrel Status Menu

Barrel Status Menu Button Descriptions:

#1 - MENU . . . bring up the Choose Mode menu (menu 2) **service use only**
#2 - ON . . . . . turn all cylinders ON (beater bar turning and refrigeration active)
#3 - OFF . . . . . turn all cylinders OFF (beater bar off and refrigeration inactive)
#4 - Not used . in the Bag-In-Box System
#4 - SYRUP . . pressing the SYRUP button causes the syrup to prime in the Tank System
#5 - ERR . . . . . pressing ERR displays the Error menu which lists all system errors

If there are no Syrup Sold Out conditions the Syrup message is not displayed for button #4 (button #4 is only used for Tank System), and if there are no errors the ERR message is not displayed for button #5.

From the Barrel Status menu pressing Menu displays the Control Panel menu (menu 2).

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Error & Non-Error Messages

NOTE: IF the LED on display panel is ON please see Tech Tip TT-04-12, on www.cornelius.com, for information on the Production Safety System Response.

The following status messages may be displayed for each cylinder.

Cylinder Status Menu Error Messages:

SYRUP . . . . . .syrup sold out - replace syrup

CO2. . . . . .sold out - replace CO_2

H2O. . . . . .H_2O sold out

ERROR. . . . . .electronics problem - call service

TIME CLOCK . . . . . .real time clock error - call service

HOT GAS . . . . . .hot gas condition - call service

VOLT . . . . . .high or low voltage - call service

DRIVE. . . . . .motor problem - call service

TORQUE. . . . . .over torque - call service

REFRIG . . . . . .freeze cylinder refrigeration or ice bank refrigeration, call service

SENSOR. . . . . .sensor problems - call service

Cylinder Status Menu Non-Error Messages:

ON. . . . . .beater bar is turning and refrigeration to this freeze cylinder is active

OFF. . . . . .beater bar is not turning and refrigeration to this freeze cylinder is inactive

MOTOR. . . . . .beater bar is turning and refrigeration to this freeze cylinder is inactive

DFRST . . . . . .freeze cylinder is presently in defrost mode

Solid red LED (just above the display) . .thermostat has tripped, call for service

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