SERVICE BULLETIN SB3089
Rev A 10/12

Balcrank®

fusion 2.4 - CCS

Model 3110-026..... Central Control Fluid Management System

Thoroughly read and understand this manual before installing, operating or servicing this equipment.

INSTALLATION AND CONFIGURATION GUIDE

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CONTENTS

CCS KEYPAD DESCRIPTION

Disclaimer

The user/purchaser is expected to read and understand the information provided in this manual, follow any listed Safety Precautions and Instructions and keep this manual with the equipment for future reference. The information in this manual has been carefully checked and is believed to be entirely reliable and consistent with the product described. However, no responsibility is assumed for inaccuracies, nor does Balcrank Corporation. assume any liability arising out of the application and use of the equipment described.

Product Identification Information

Record the product identification numbers from the nameplate here.

Model Number _____

Serial Number _____

Tag Number _____(if applicable)

Keypad Installation

- Mount the keypad upright with the antenna pointing upward, near a 120V AC electrical outlet.
- Mount the keypad to a structurally sound wall through the two holes on the top of the keypad case and one hole on the bottom of the keypad.
- Height on the wall should be 5 feet to 6 feet.
- Avoid direct, significant, heat sources.
- Do not mount the keypad behind any steel objects (tool storage cabinets or metal chain link fences) that may block the RF communication signals.

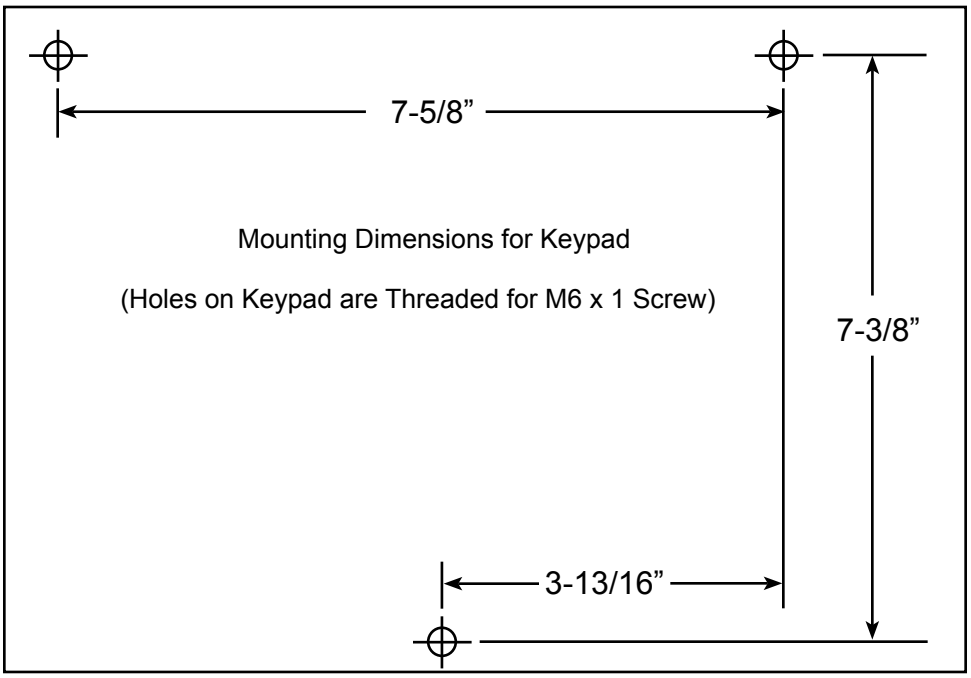


Figure 1: Keypad Installation

Specifications

Power Requirements	120V AC 50/60 Hz
RF Communications	2-way, 2.4…2.5 GHz Direct Sequence Spread Spectrum
RF Network	Self-healing Mesh Network
Operating Temperature	14…140° F (–10…60° C)

Certification

- Contains FCC ID: S4GEM35XB
- Contains IC: 8735A-EM35XB
- FCC CERTIFIED, PART 15, SUB-PART C
- CE0681 EC-R&TTE Certified

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING

To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operations at closer distances than this are not recommended.

NOTE

It is highly recommended to use a surge suppressor for AC power connection on the keypad. Warranty does not cover damage due to power surge

CAUTION

If there are any other wireless devices/networks in the faciltiy, ensure that they are powered up and active ***before*** powering up the fusion keypad(s). This is so fusion can detect and avoid any other wireless devices/networks in the facility/area.

Set-up Diagram

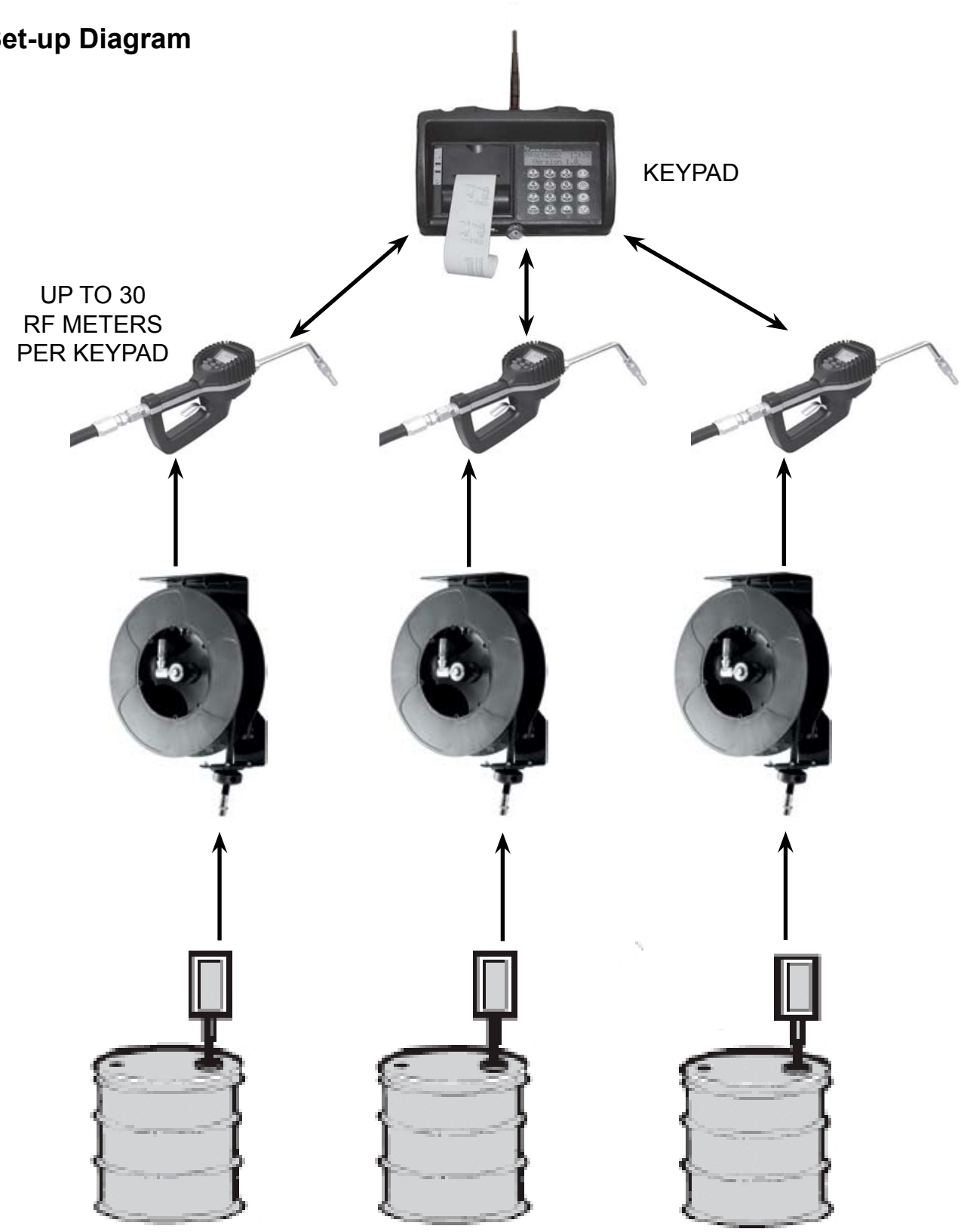


Figure 2: Setup Diagram

UP TO 8 TANKS

UP TO 8 FLUID TYPES

CCS Keypad Keys

The **Scroll** key selects options on the active display.

The **Home** key returns the display to the default screen.

The **Backspace** key deletes one character to the left of the cursor each time it is pressed.

The **Enter** key completes the current action then displays the next screen.

The **Space** key adds a blank space to the right of the data just entered.

The **Alphanumeric** keys enter numbers and alpha characters (letters).

- To enter a number, press and release a key.
- To enter a letter, press and hold the key until the letter you want displays, then release the key.

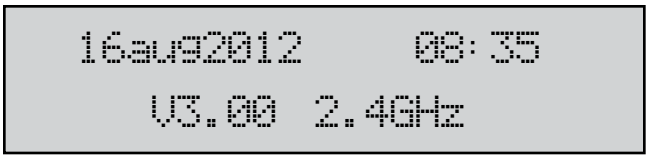
CCS KEYPAD SCREEN TYPES

The remainder of this document shows only the actual display, not the entire keypad.

Default Screens

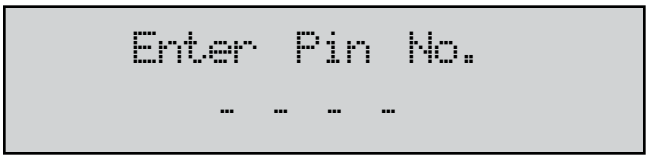
The Default screens toggle between the System Version screen and the *Enter PIN Number* screen. The System Version screen displays for 2 seconds, then the *Enter PIN Number* screen displays for 3 seconds. The cycle repeats until a PIN number is entered.

System Version



The first default screen is informational. It shows the date, time and software version number.

Enter PIN Number



The second default screen is used by the supervisor to access the management screens: Initialization, Configuration, Meter, Report (External Printer), 190 (Internal Printer) and Radio. There can be only one supervisor account per keypad.

NOTE

To prevent unauthorized access to system configuration options, the Supervisor password should be limited to qualified personnel

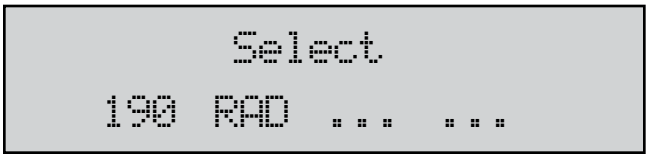
The Personal Identification Number (PIN) is four digits. To access management screens, enter the supervisor PIN number. The default is 0000 at initial power-up.

Management Screens

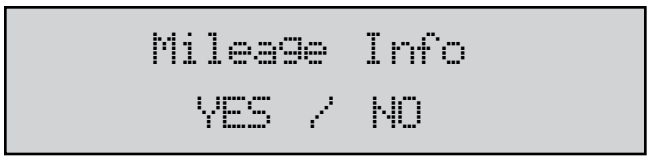
The Management screens are available after the supervisor PIN number has been entered. The Management screens are:

- Initialization (INI)
- Configuration (CNF)
- Meter (MET)
- Report (REP) External Printer
- 190 Report Internal Printer (FT190 is the model number of the internal printer)
- Radio (RAD)

To select a Management screen, press the **Scroll** key to move through the menu options until the screen you want is highlighted, then press **Enter**.

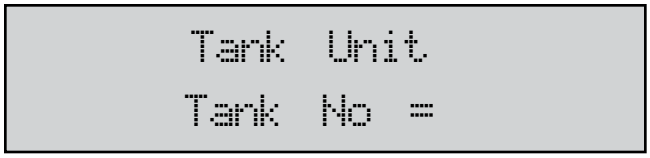


Multiple Choice Screens:



For Multiple-Choice screens, use the **Scroll** key to move the cursor to either **YES** or **NO**, then press **Enter**.

Input Screens:



To enter or change information on the input screens, press the **Backspace** key to delete the current information, then use the keypad keys to type the new information, then press **Enter** to save the change.

INITIALIZATION (INI) MENU

The Initialization screens appear in this order:

- Time and Date
- Tank Initialization
- Fluid Initialization
- Adding or Deleting RF Meters/Hoses
- Adding or Deleting Operators

The *INI* menu can be accessed only when the Dispense Order (WO)list is empty. The supervisor must clear all transactions through *Configure (CNF)* before the INI menu becomes available. Refer to "CONFIGURATION (CNF) MENU" on page 15 for details on clearing transactions.

The parameters are:

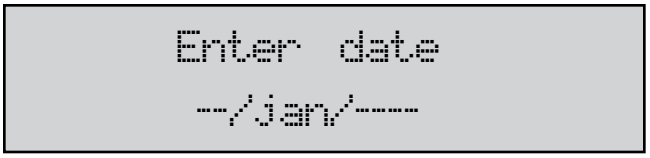
- System date and time are initially blank
- System time is in military standard

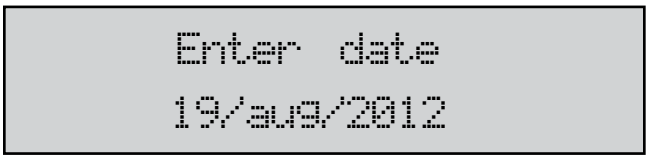
NOTE: System date is in format DD/MMM/YYYY (in English). If you do not want to change the Time and Date settings, press **Enter** to advance to the Tank Unit screen.

Time and Date Screens

To change or set the system time:

1. Use the numeric keys to set the time (the system uses a 24 hour clock).
2. Press **Enter** to save the setting and move to the Enter Date screen.





To change or set the system date:

1. Use the numeric keys to enter the two-digit day
   The cursor automatically moves to the month.
2. Press the **Scroll** key to select a month.
3. Use the numeric keys to enter the four-digit year.
4. Press **Enter** to save the setting and advance to the Tank Initialization screens.

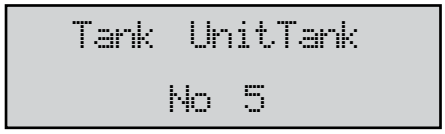
Tank Initialization

The Tank Initialization screens are used to set up tanks in the system. Each tank is assigned a number and a starting quantity level in the desired unit of measure. The parameters are:

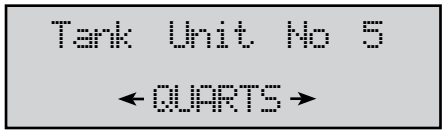
- Maximum of 8 Tanks.
- Tank ID's are numbered 1 through 8.
- Tank unit of measure can be quarts, liter, pints or gallons.
- Set the dispensing unit of measure to the desired unit.
- The tank stock level setting is updated after each dispense from the associated tank.
- The tank stock level quantity setting format is 5.3 digits (99999.999).
- The remaining tank stock level quantity is printed to the nearest whole number after each dispense on a ticket.
- The Supervisor updates the tank level quantity setting at any time by entering these screens to change stock levels.

To install a Tank:

1. Select **Tank Unit Number**.
   a. Enter a numeric value from 1 to 8 and press **Enter**.
   b. Pressing the **Enter** key with no entry advances to Fluids screens.



2. Select **Fluid Quantity** or **Remove a Tank**.
   a. Use the **Scroll** key to select **LITER, GALLONS, PINTS, QUARTS** or **REMOVE**. (The REMOVE option deletes a tank from the system.)
   b. Press **Enter** to advance to the Tank Stock Level screen.



3. Select a Tank Stock Level.
   a. Use the numeric keys to enter a stock level from 00000.000 to 99999.999.
   b. Press **Enter** to move to next screen.
   c. When all tanks have been added, press **Enter** to advance to the *Select Fluid* screen.

Fluid Initialization

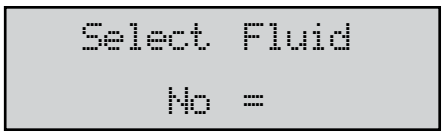
The Field Initialization screen is used to set initial tank stock level or whenever a supplier delivers fluid. The fluid screens allow a supervisor to set Fluid Names used in the system.

The parameters are:

- Maximum of 8 fluid types
- The fluid type ID number ranges from 1 to 8
- The fluid type name is a 16-character alphanumeric string
- Initially, the fluid type name is blank

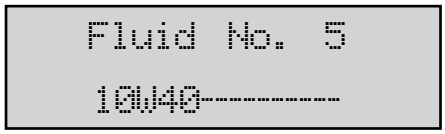
Tank-Fluid Relationship

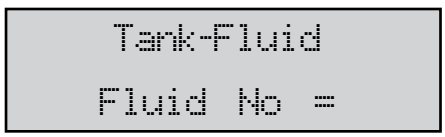
The relationship between tank ID and fluid type ID is 1:1 (one tank assigned to one fluid type). For example, a supervisor may associate tank #1 with fluid #3 or tank #5 with fluid #5. Each tank must be associated with one, and only one, fluid type.



To associate a tank with a fluid:

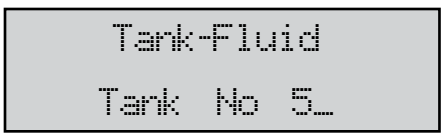
1. Enter a valid number for the fluid and press **Enter**.
2. Enter a *name* for the fluid and press **Enter**.
3. Enter a valid number for the tank and press **Enter**.
   The *Tank-Fluid, Fluid No.* screen displays again.





Pressing **Enter** while the Tank-Fluid, Tank No. screen is blank advances to the *Adding Hoses* screen.
Pressing **Enter** with no entry advances to the *Create Hose* screen.

4. Enter a valid *number* for the fluid in the tank press **Enter**.

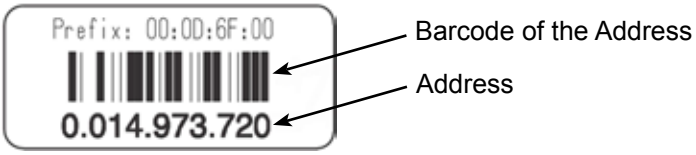


Pressing **Enter** after a entering valid tank number displays the *Tank-Fluid, Fluid No.* screen again.

Creating or Deleting an RF Meter/Hose (Meter and Hose are Synonymous)

This set of screens allows a supervisor to create or delete RF Meters/Hoses from the keypad.

- The RF Meter/Hose identification number is listed on the RF Meter/Hose under the battery pack or on an attached tag.



- The RF Meter/Hose Address identification number format is 10 decimal digits (X.XXX.XXX.XXX). The Hose Prefix number format is 8 hexa-decimal (0-9, A-F) digits (XX.XX.XX.XX). Leading zeros must be entered.
- Maximum of 30 RF Meters/Hoses in the system.
- Initially, the RF Meter/Hose address list is empty.
- A keypad can exchange data only with RF Meters/Hoses that have identification numbers entered into the keypad.
- All RF Meter/Hose addresses and IDs are unique.
- The relationship between a tank and RF Meters/Hoses is 1:n (one *tank* is assigned to *n* RF Meter/Hoses).

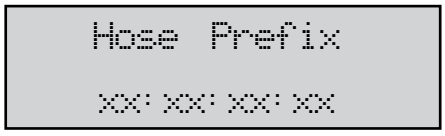
Due to the relationship between tank and fluid type, an RF Meter/Hose is assigned to only one fluid type.

Creating an RF Meter/Hose

- After a valid RF Meter/Hose address is entered, the *Tank-Hose* screen displays.
- If the RF Meter/Hose address entered is already used, *Hose Address Already Used* screen displays.
- Pressing the **Enter** key with no entry moves to the *Delete Hose* screen

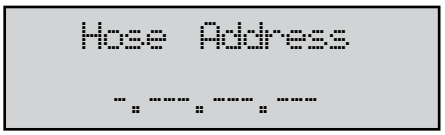
On the *Create Hose* screen:

1. Use the **Scroll** key to move the cursor to select **YES**.
2. Press **Enter** to advance to the *Hose Prefix* screen.



3. Leave the hose prefix at default. If you are directed to change it by the factory, press the **Backspace** key repeatedly until the cursor is positioned on the first digit.
4. Type the Hose Prefix and press **Enter**.

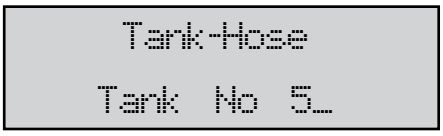
1. Use the **Scroll** key to move the cursor to select **YES**.
2. Press Enter to save the prefix and advance to the *Hose Address* screen.



3. Type the Hose Address and press **Enter** to advance to the *Hose ID* screen.

The *Hose ID* screen identifies which hose is assigned to the tank and fluid.

NOTE: Hose ID is the number used to create dispense orders for a meter by an operator.

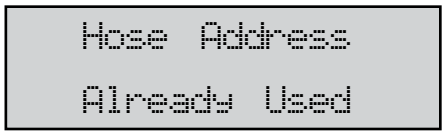


On the *Tank-Hose* screen:

4. Enter the number corresponding to the tank and hose and press **Enter**.

The relationship between tank and RF Meter/Hose is 1:n (*one* tank is assigned to *n* meters). There is a relationship between tank and fluid type. The RF Meter/Hose is assigned to one fluid type. Assign the RF Meter/Hose to the tank to which it is connected.

Hose Address Already Used



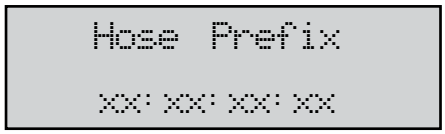
This screen displays if another RF Meter/Hose already uses the same prefix and address. If this screen displays, check the RF Meters in the system to make sure duplicate RF Meters do not exist. Then check to see if this RF Meter/Hose has already been created in the system. The message displays for 3 seconds then returns to Create Hose screen.

Deleting an RF Meter/Hose

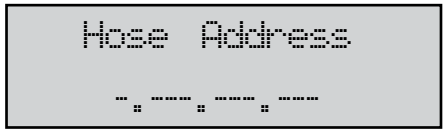
The supervisor has the option to delete an RF Meter/Hose through this screen. This is necessary when there is a change to the system or when an RF Meter/Hose needs replacement for any reason.

The supervisor should delete from the keypad the removed RF Meter/Hose prior to creating a new RF Meter/Hose. This puts the new RF Meter/Hose in the same logical position with the keypad and the dispense order process remaining the same.

1. Use the **Scroll** key to move the cursor to select **YES**.
2. Press **Enter** to advance to the *Hose Prefix* screen.



3. The hose prefix should appear by default, press **Enter**.



4. Type the Hose Address and press Enter.
   Pressing the **Enter** key with no entry displays the *New Operator* screen.
5. The screen displays the Hose ID of the deleted RF Meter/Hose.

Adding and Deleting Operators

- Only an operator with a valid PIN can dispense fluid.
- A maximum of 49 operators may be active in the system at one time.
- The operator ID (PIN number) format is 4 numeric digits.
- The operator name format is 16 alphanumeric digits. Initially, the operator list is empty.

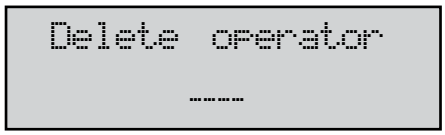
Adding an Operator

The *New Operator* screen displays if you press the **Enter** key when there is no entry.

1. Type in the operator's 4 digit ID PIN number and press **Enter** to add it to the list.
2. Type in the operator's name using the keypad (press & hold key until the desired letter appears) and then press **Enter** to add it.
3. Repeat steps 1 and 2 to add more operators.
4. When finished adding operators, press **Enter** while New Operator is blank.

Deleting an Operator

The *Delete Operator* screen displays if you press the **Enter** key when there is no entry.



1. Type in the operator's 4 digit ID PIN number and press **Enter** to delete it from the list.
2. Repeat step 1 to delete more operators.
3. When finished deleting operators, press **Enter** while *Delete Operator* is blank.

CONFIGURATION (CNF) MENU

The *Configuration (CNF) Menu* allows a supervisor to set up all parameters for the keypad operation. A supervisor is the only user with access to these screens. When everything is complete in the *Configuration Menu*, the supervisor should print the settings from the keypad and put them in a safe place. Refer to “Report (REP) Menu (External Printer)” on page 21 or “190 Menu (Internal Printer)” on page 21 for information on printing reports.

1. Press the **Scroll** key until **CNF** is highlighted.
2. Press **Enter**.

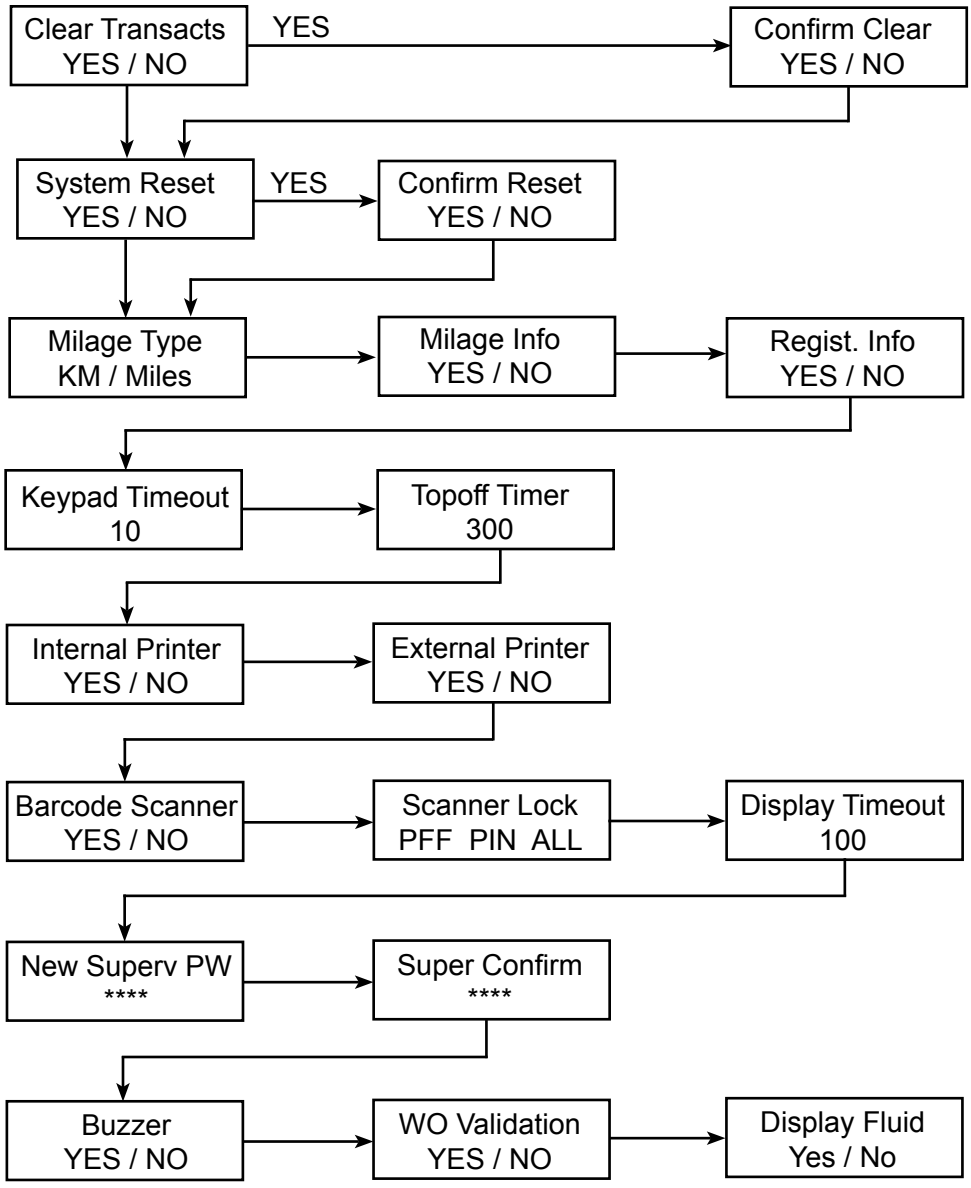
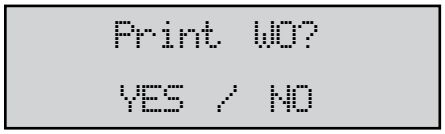


Figure 3: Configuration Menu Flow Chart

Clearing Transactions from Keypad Memory

• Removes all transactions (Dispense Orders) previously recorded in memory.
• Clear transactions erases WO results data.

Use the **Scroll** key to move the cursor to either **YES** or **NO** and press **Enter**.

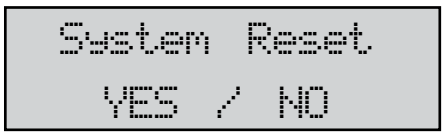


• If you select **YES** and the external printer is enabled (refer to “External Printer” on page 17), the display asks if you want to print the WO results.

• If you select **YES** and the external printer is not enabled, you are asked to confirm the clear.
• If you select **NO**, the menu advances to the *System Reset* screen.

System Reset

The *System Reset* allows a supervisor to reset all configuration parameters to default values.



Use the **Scroll** key to move the cursor to either **YES** or **NO**

a. If you select **YES**, the keypad asks you to Confirm Reset.
b. If you select **NO**, the keypad advances to the *Mileage Type* screen.

2. Press **Enter**.

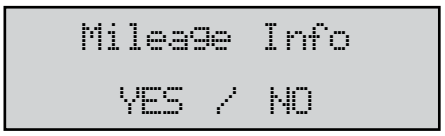
Mileage Type

The *Mileage Type* allows a supervisor to select how vehicle mileage is stored in the keypad. The options are KM (default) and MILES

1. Use the **Scroll** key to move the cursor to either **KM** or **Miles**.
2. Press **Enter** to advance to the *Mileage Info* screen.

Mileage Information

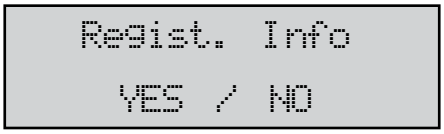
The *Mileage Information* screen selects the option to collect vehicle mileage information for each dispense order. The options are **YES** and **NO** (default).



1. Use the **Scroll** key to move the cursor to either **YES** or **NO**.
2. Press **Enter** to advance to the *Registration Information* screen.

Registration Information

The *Registration Information* screen selects the option to collect registration information for each dispense order. The options are YES and NO (default).



1. Use the **Scroll** key to move the cursor to either **YES** or **NO**.
2. Press **Enter** to advance to the Keypad Timeout screen.

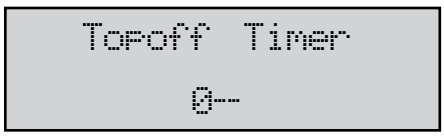
Keypad Timeout

- Timeout parameter corresponds to the time it takes to validate after all dispense order data has been entered. If the Enter button is not pressed within the time allocated, the keypad display goes back to initial menu and the input data is erased.
- The Keypad Timeout is between zero to 255 seconds (0 = no timeout) and the default for this feature is 10 seconds.

1. Press the **Backspace** key to erase the current setting.
2. Type in the new setting.
3. Press **Enter** to advance to the *Topoff Timer* screen.

Topoff Timer

- This is the time a user has to top-off a dispense after the complete preset batch has been dispensed.
- If a user has not pressed reset on an RF Meter/Hose within the topoff period, the RF Meter/Hose transmits the dispensed order quantity to the keypad and locks out the RF Meter/Hose.
- The topoff time is equal to one second for each count. For example, 600= 600 seconds or 10 minutes.
- The topoff timer can be set from zero to 15 minutes.



1. Press the **Backspace** key to erase the current setting.
2. Type in the new setting.
3. Press **Enter** to advance to the *Internal Printer* screen.

Internal Printer

Use the *Internal Printer* screen to print dispense ticket information.

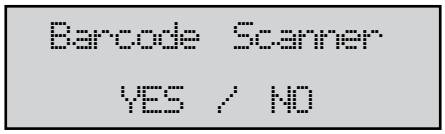
1. Use the **Scroll** key to move the cursor to either **YES** or **NO**. To print the dispense ticket on the keypad printer, set this option to **YES**.
   To print to a remote printer or to not print a ticket, set this option to **NO**.
2. Press **Enter** to advance to the *External Printer* screen.

External Printer

This option is **not** used in fusion 2.4.

NOTE: External printer must be set to **No** to select the Barcode Scanner.

Barcode Scanner



1. Use the **Scroll** key to move the cursor to either **YES** or **NO**.
2. Press **Enter** to accept the setting and advance to the next screen.

• If you select **YES**, the display advances to the *Scanner Lock* screen.

• If you select **NO**, the display advances to the *Scanner* screen.

Hardware Requirements

The barcode scanner must support an RS-232 output interface for use in the RF FMS. The barcode scanner serial output must support standard RS-232 levels of ±3V DC to ±12V DC. Logic level or TTL output signals are not supported by the RF FMS. The barcode scanner is connected to the RF FMS Dispense Keypad via the external printer RS-232 port with DSUB9 connector on the bottom of the CCS Keypad. The RS-232 port on the CCS Keypad is configured for a Device Circuit-Terminating Equipment (DCE) pin out configuration. A null modem adapter is required for barcode scanners that are also terminated with a DCE pin out configuration. The required RS-232 port settings for the barcode scanner input are as follows:

Baud Rate	9600 Baud
Data Bits	8 Bits
Stop Bits	1 Bits
Parity	Odd
Hardware Flow Control	None

The data output of the barcode scanner is required to be a stream of ASCII characters representing the barcode. To identify the end of transmission, the stream of ASCII characters should be terminated by a carriage return and line feed ASCII characters.

• Barcode Scanner cannot be used with Remote Printer.
• External Printer setting must be set to **NO**.

Scanner Lock

The *Scanner Lock* screen has three selectable settings: OFF, PIN, and ALL. Depending on the setting chosen, different user input screens will allow input from the keypad or barcode scanner.

The table below outlines the screens where the keypad is active or disabled based on the three different settings for the Scanner Lock feature.

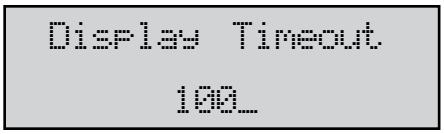
Screen	OFF	PIN	ALL
PIN Entry User	Both	Scanner	Scanner
PIN Entry Supervisor	Both	Both	Both
WO Number	Both	Both	Scanner
Meter ID	Both	Both	Scanner
Quantity	Both	Both	Scanner
AN Field	Both	Both	Scanner
N Field	Both	Both	Scanner

Pin Number Prefix Code

When PIN or ALL is selected for the Scanner Lock, you can choose an additional prefix character. The prefix character will not be displayed and cannot be entered on the keypad.

1. Use the **Scroll** key to move the cursor to either **YES** or **NO**.
2. Press **Enter** to move to *Encode Prefix* screen.

3. Press the **Scroll** key until the desired prefix displays. Available characters are: # $ % & ‘ ( ) * + , - Space / : ; < = > ? @ [ ] ^ ` { | } ! #
4. Press **Enter** to advance to the *Display Timeout* screen.



The Display Timeout determines how long an entry will remain on the display before it automatically advances to the next entry screen. Each count provides a 1/100 of a second delay. A value of 100 is equal to 1 second.

1. Press the **Backspace** key to erase the current setting.
2. Type in the new setting.
3. Press **Enter** to advance to the *New Supervisor Password* screen.

New Supervisor Password

- The default Supervisor Password is 0000.
- A supervisor can change this password during initial system setup.
- A maximum of one Supervisor login password is allowed.

NOTE: If the password is lost, consult the factory for the procedure to reset it.

1. Press the **Backspace** key to delete the active password.
2. Use the numeric keys to enter a new password.
3. Press **Enter**.

(Pressing **Enter** with no entry just advances to the *Buzzer* screen without changing the password).

4. Re-enter the new password to confirm.

Buzzer

This screen provides a user with the option to have a beep on every key entry. The default is YES.

1. Use the **Scroll** key to move the cursor to **YES** or **NO**.
2. Press **Enter** to advance to the *Work Order* screen.

Work Order

The *Work Order* screen elects the option to require a work order number to be entered. The options are YES (default) and NO.

1. Use the **Scroll** key to move the cursor to **YES** or **NO**.
2. Press **Enter** to advance to the *Display Fluid* screen.

Display Fluid

The *Display Fluid* screen selects the option to display the fluid selected. The options are YES (default) and NO.

1. Use the **Scroll** key to move the cursor to **YES** or **NO**.
2. Press **Enter** to move back to the main *Select* screen.

METER RESET (MET) MENU

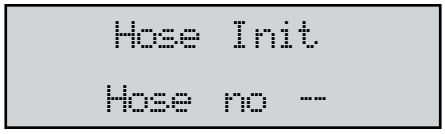
- Only the supervisor has access to MET.
- The supervisor may delete a dispense order in the keypad queue for a single hose or for all hoses in the system.
- If the supervisor selects all RF Meters, all dispense orders in the queue are deleted.

1. From the *Select* menu, use the **Scroll** key to move the cursor to **MET**.
2. Press **Enter** to advance to the *Init All Hose* screen.

3. Use the **Scroll** key to move the cursor to **YES** and press **Enter** to advance to the *Start Hoses Init* screen.

4. Press **Enter** to Start Hoses Initiation. The display then returns to the *Select* menu.

If you select **NO** at step 2 above, you will be prompted for a hose number to reset.



1. Type in a hose number.
2. Press **Enter** to reset the hose screen.
3. Repeat steps 1 and 2 for all the hoses that require initialization.
4. Press the **Home** key to return to the *Select* screen.

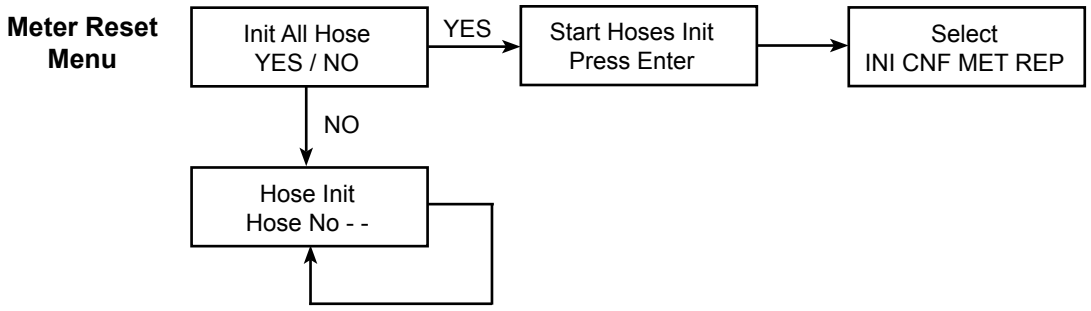


Figure 4: Meter Reset Menu Flow Chart

REPORTS

When everything is complete in the *Configuration* Menu, the supervisor should print the settings from the keypad and put them in a safe place.

You can print reports:

• From an external printer via the *Report* menu (**not used in fusion 2.4**).

• From the internal printer via the *190* menu.

Report (REP) Menu (External Printer)

This option is **not** used in fusion 2.4.

190 Menu (Internal Printer)

The *190* menu screens allow you to print these reports from the internal keypad printer:

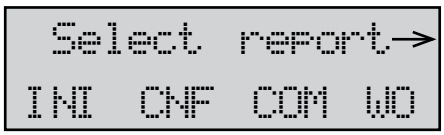
• Initialization (INI)

• Configuration (CNF)

• Communication (COM)

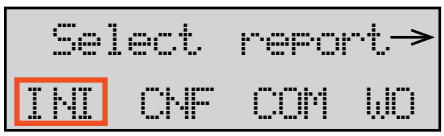
• Work Order (WO)

1. Use the **Scroll** key to move the cursor to the **190** selection.
2. Press **Enter** to display the *Select Report* screen.



3. Use the **Scroll** key to move the cursor to the report you want to print.
4. Press **Enter** to print the report.
5. Tear off the ticket from the keypad.
6. Press **Home** to go back to the default screens.

Initialization Report

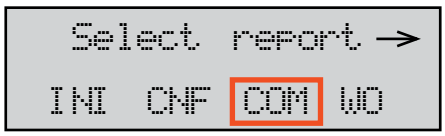


1. From the *Select Report* screen, use the **Scroll** key to move the cursor to **INI**.
2. Press **Enter** to print the report.

Configuration Report

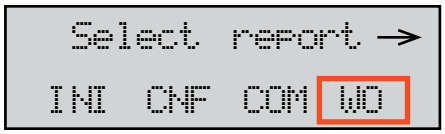
1. From the *Select Report* screen, use the **Scroll** key to move the cursor to **CNF**.
2. Press **Enter** to print the report.

Communications Report



1. From the *Select Report* screen, use the **Scroll** key to move the cursor to **COM**.
2. Press **Enter** to print the report.

Completed Work Order Report



1. Use the **Scroll** key to move the cursor to **WO**.
2. Press **Enter** to advance to the *Select Report* screen.
3. Use the **Scroll** key to select a report.
4. Press **Enter** to print the report.

RADIO (RAD) MENU

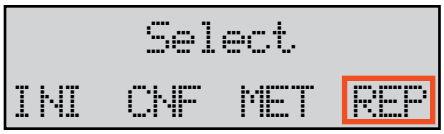
The *RAD* menu screens are:

• Address (ADR) – toggles the display between the Radio Address and the Radio Prefix screens.

• Network (NWK) – allows you to select the Radio Network.

• Power (PWR) – displays the radio's transmit (Tx) output power.

• Station (STA) – displays the Radio Network Status.



1. Use the **Scroll** key to move the cursor to **REP**.

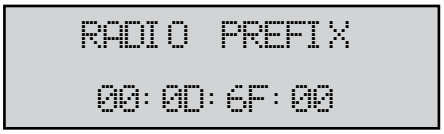
2. Press **Scroll** two more times to move the cursor to the RAD selection.
3. Press Enter to display the **RAD** screen.

4. Use the **Scroll** key to move the cursor to the information you want to display.
5. Press **Home** to go back to the default screens.

Radio Address/Radio Prefix

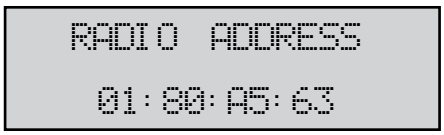
Once you select **ADR**, you can use the **Scroll** key to toggle between the Radio Address and the Radio Prefix screens.

1. Use the **Scroll** key to move the cursor to **ADR**.



2. Press **Scroll** again to display the *Radio Prefix* screen.

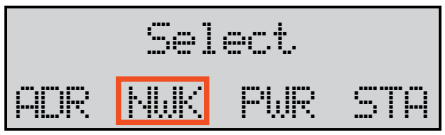
NOTE: DO NOT CHANGE THE RADIO PREFIX!



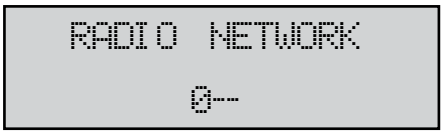
3. Press **Enter** to display the Radio Address screen.
4. Press **Enter** to return to the selection screen.

Radio Network

The *Radio Network* default is zero. You need to change this setting only if you have multiple RF FMS systems (see **NOTE** on page 24). All RF Meter/Hose *Radio Network* settings must match the CCS Keypad setting.



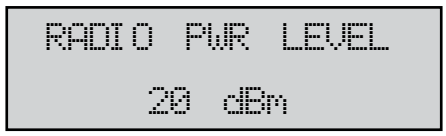
1. Use the **Scroll** key to move the cursor to **NWK**.
2. Press **Enter** to display the *Radio Network* screen.



3. To change the newtork setting type in the desired network number (e.g. 1, 2, 3...) and press enter.
4. Press **Enter** to return to the selection screen.

Radio Power

1. Use the **Scroll** key to move the cursor to **PWR**.
2. Press **Enter** to display the *Radio Power Level* screen..



3. Press **Enter** to return to the selection screen.

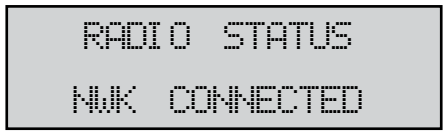
Radio Status

The Radio Status options are:

• NWK CONNECTED – The network is connected and operational.

• SERIAL ERROR – There is a radio communication error on the serial bus between the keypad and the radio.

1. Use the **Scroll** key to move the cursor to **STA**.
2. Press **Enter** to display the *Radio Status* screen..



3. Press **Enter** to return to the *Select* screen.

NOTE

If multiple fusion systems are used within the same facility, each system must be in its own network. In this situation, ***do not*** use network 0, (use network 1, 2, 3...etc). If one of the system components (keypad) is set back to factory default (network 0), this will create interference and erratic operation on the components (keypads and control handles) that are already using network 0.

NOTE

Each meter can only be associated with one keypad.

NOTE

Maximum of 30 meters per keypad

FLUID / TANK DEFINITIONS

• Maximum of 8 Tanks and Fluids.
• The Tank capacity value is formatted xxxxx.xxx.
• Fluid name can be up to 16 alphanumeric characters.

Tank Identification	Fluid Identification or Name	Tank Level	Tank Capacity
1			
2			
3			
4			
5			
6			
7			
8			

HOSE / METER DEFINITIONS

• Maximum of 30 Hose / Meters.
• Hose Prefix data format is xx.xx.xx.xx (8 digits).
• Hose Address data format is x.xxx.xxx.xxx (10 digits).

Hose/Meter Identification	Hose Prefix xx.xx.xx.xx	Hose Address xxx.xxx.xxx.xxx	Tank Number
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

Hose/Meter Identification	Hose Prefix xx.xx.xx.xx	Hose Address xxx.xxx.xxx.xxx	Tank Number
25			
26			
27			
28			
29			
30			

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