Cleveland

Cleveland Range

Tumble Chiller

Operator’s Manual

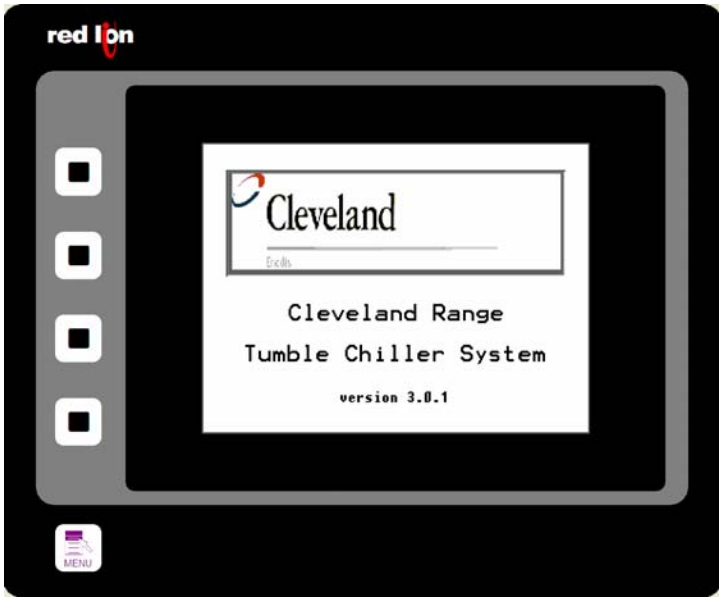
Version 3

The purpose of this manual is to guide the operator in the operation of Cleveland Range's Tumble Chiller system. This manual is an overview and not intended to answer any and all questions concerning the operation and functions of the Tumble Chiller. Please contact Cleveland Range for any and all technical questions concerning this product.

Power-up the Tumble Chiller

Turn on the power by switching the "Power" switch on the front of the control panel.

As the system powers up the operator interface screen will display the "Cleveland" logo.



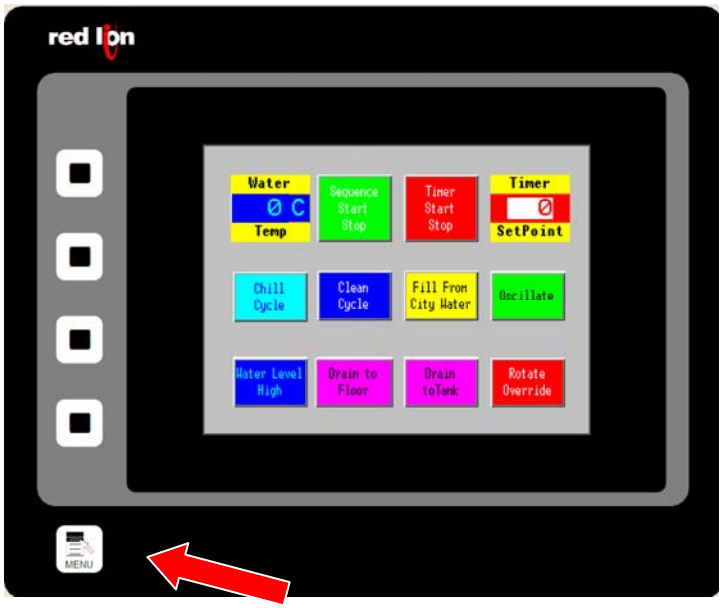
After about five (5) seconds the operating screen will appear.

Operational Notes

Before we start the actual discussion of the operation of the system, we need to cover some points about the Operator Interface Panel or screen.

- There are five (5) keys on the face of the panel that are used to bring up various menus. On the Tumble Chiller only the key labeled "Menu" is activated and available for use.
- All of the illuminated part of the panel is touch activated. The areas that are active on any screen indicated by a colored box that will either jump to another screen, perform some action, or bring up a number pad for data entry.

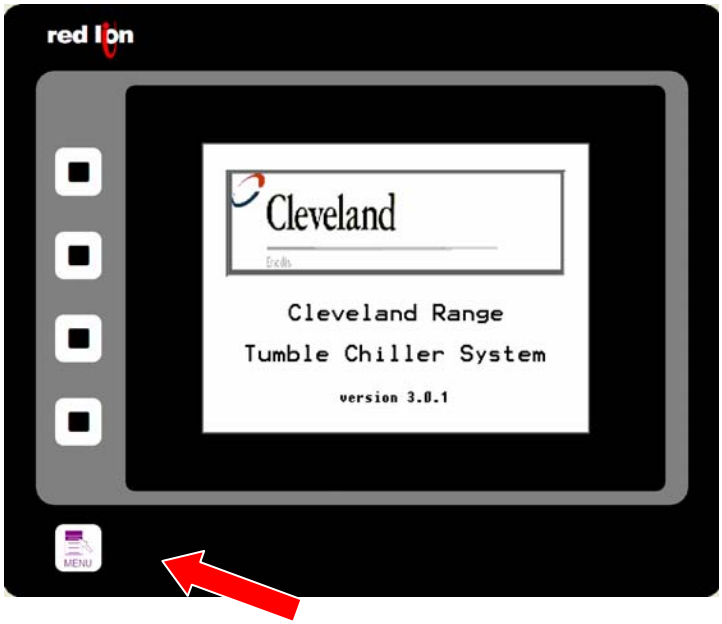
- It should also be noted that some buttons on the various screens are not visible at all times. When a button is not valid, pertinent or active, it will not be displayed.
- Finally, a couple of notes about this manual. This is not designed to be an inclusive guide for every situation encountered, although every attempt has been made to cover the everyday situations.
- On several of the screen images there are red arrows that point to buttons or areas of the screen being discussed in the text. (example)



Configuration Settings

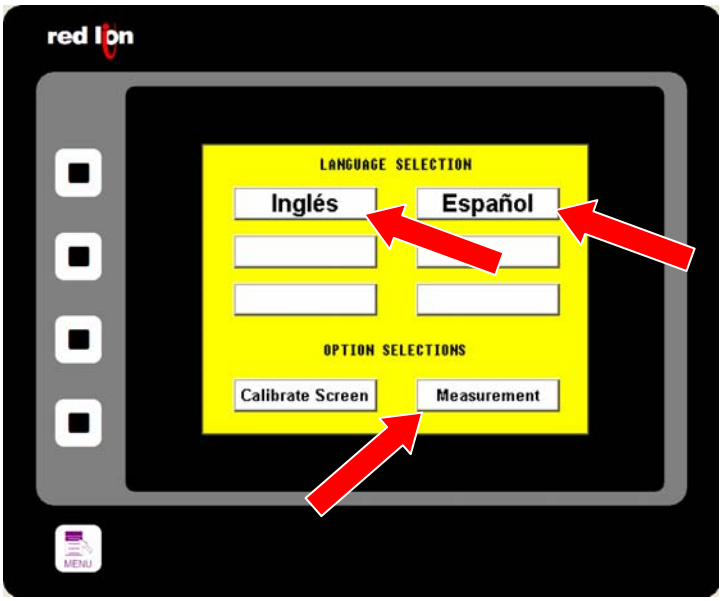
When the system is powered up the initialization screen is displayed. This screen is held for five (5) seconds to allow the programmable logic controller to power up and stabilize before the operation of the Tumble Chiller can function.

Within that five (5) second period the configuration can be changed to reflect the local units and parameters. By pressing the “Menu” button while this screen is displayed the configuration menu is entered.



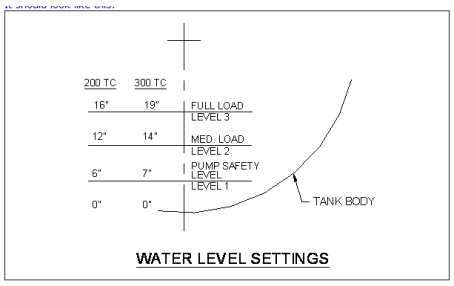
The first screen in the configuration menu is the operating language selection. By pressing the desired language, all text on all the screens will change to the selected language. At this time only English and Spanish languages are available. Other languages may be made available upon request.

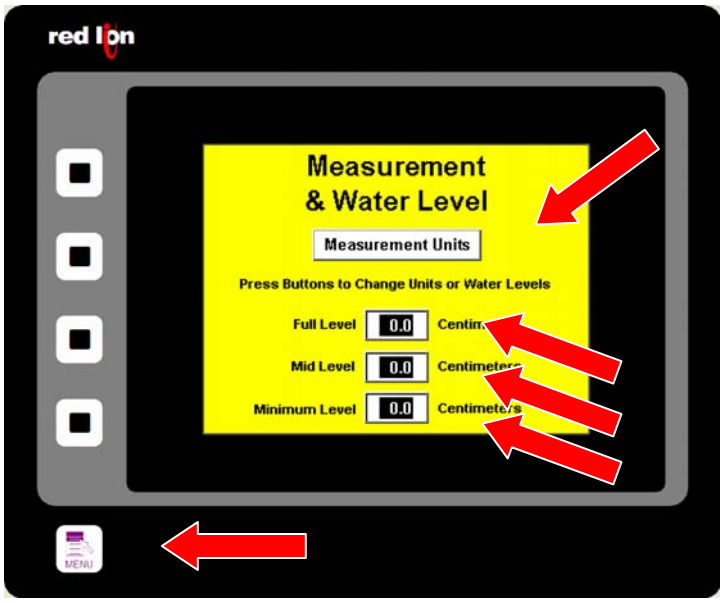
Language Screen



The lower section of the display shows the other configuration option as "Measurement". Pressing this button will display the measurement options. These options include the three (3) operating levels and the units of measurement.

Measurement & Water Level Screen





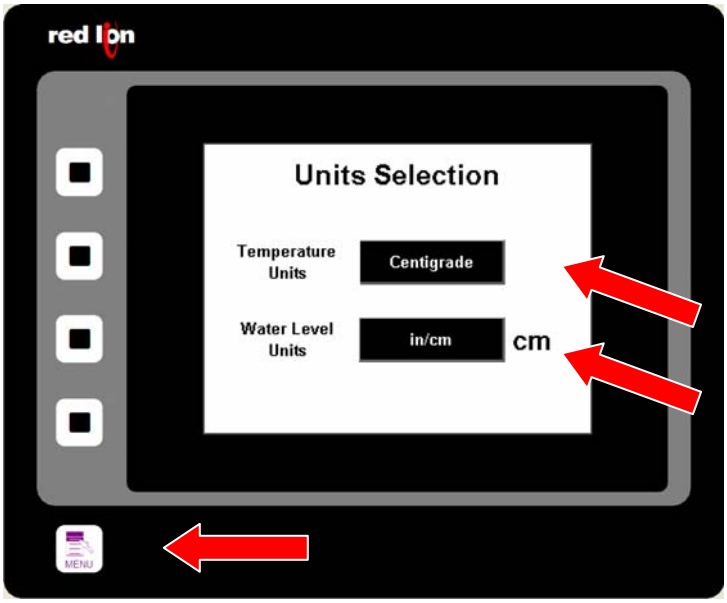
Pressing the numerical valve button(s) will bring up a number pad where the operator can enter the water level, in inches or centimeters, associated with each

of the operating levels. The full level is the maximum water level, and is referred to as the "High" level on the operating screen. The mid level is the "Medium" level on the operating screen. The minimum level indicates the water level at which the pump will stop when draining the water to the reservoir tank.

Pressing the "Menu" key will return the screen to the previously displayed screen.

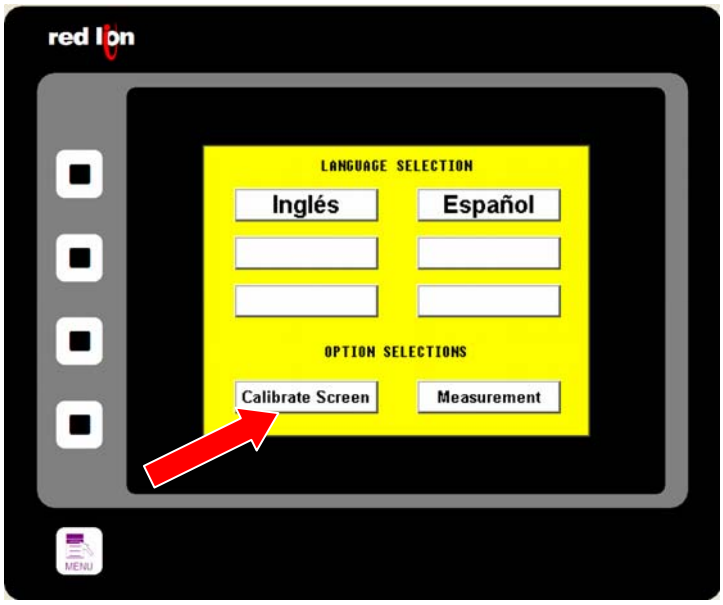
By pressing the "Measurement Units" button the display will change to allow the selection of units of measure for the temperature and for the water level.

Units Selection Screen



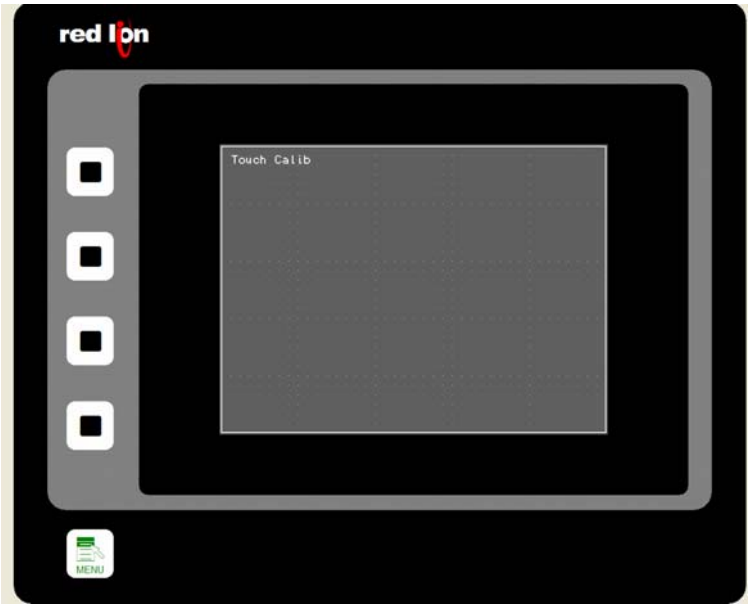
As with other screens, pressing the button(s) will allow the units of measure to switch. Temperature will switch between Fahrenheit and Centigrade, while the water level units will switch between inches and centimeters. It should be noted that changing the water level units will require the water levels to be re-entered on the previous screen.

Pressing the "Menu" key will return the screen to the previously displayed screen. Pressing the "Menu" button twice will return to the "Language Selection" screen.



The last button on the language screen is the “Calibrate Screen” button. This button will cause the screen to enter the calibration mode as shown below.

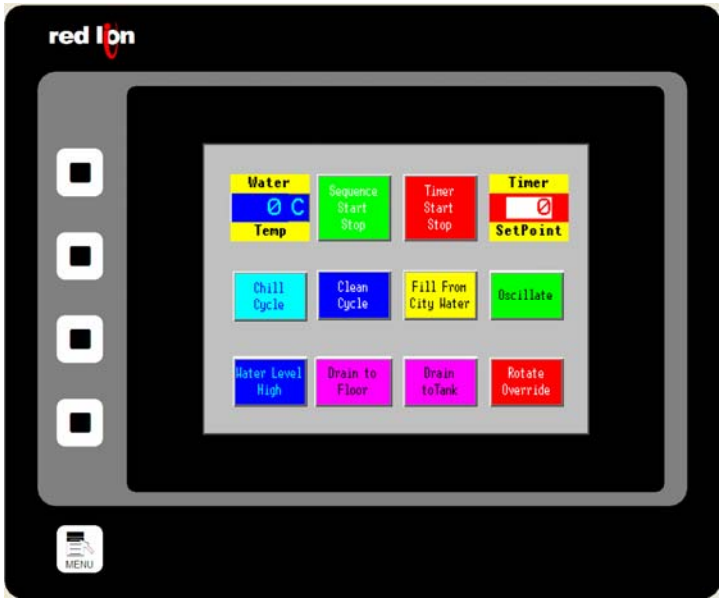
Touch Pad Calibration Screen



By following the instructions on the screen the touch pads on the screen are calibrated to the display. Pressing the “Menu” key will return to the operating screen.

Operating Screen

This is the screen that will normally be displayed during operation. Some of the buttons may not be visible at all times. During the Tumble Chiller operation any buttons not in use or not available will disappear. Therefore, the screen may not look identical to the example below.



Each of the buttons/icons will be discussed individually in the following paragraphs.

Any time the water level in the tumble chiller is above the mid-level the door is locked and will remain locked until the water level drops below the mid-level.

This icon displays the temperature of the water in the Tumble Chill.

This button starts and stops the operational sequence selected by the other buttons on the screen. Once an operation is started the only way to change a selection is to stop the operation and start over again.

The timer is started and stopped with this button. Upon timing out the strobe on top of the tumble chiller will flash until acknowledged by pressing this button again.

This count-down timer icon displays the minutes remaining on the timer. The timer value is set by pressing the numeric value which will bring up the number pad. Key in the desired number of minutes and press the “enter” button set the timer.

With this button selected the system will start a chill cycle when the green start/stop button is pressed. Water will begin filling to the selected level from the selected water source. When the water reaches the mid-level the door will lock and the circulating pump will start circulating the water through the heat exchanger, cooling the water. The system will continue in this mode until stopped by the green start/stop button.

The clean cycle is started if this button is selected and the green start/stop button is pressed. The tumble chiller is filled with hot water until the selected water level is reached. Once the mid-level is reached the door will lock and the circulating pump is started, circulating the water through the heat exchanger without chilling the water. The system will continue in this mode until stopped by the green start/stop button.

When this icon is displayed the tumble chiller will fill from the city water source. If the icon is not displayed the water source will be the reservoir tank. If there is not enough water in the reservoir the system will make up any needed water from the city water source. Whenever the system is filling from city water the chlorine pump is active, injecting the selected amounts of chlorine into the drum.

Selecting this button will cause the drum to oscillate during operation as opposed to rotating, as is the normal operation.

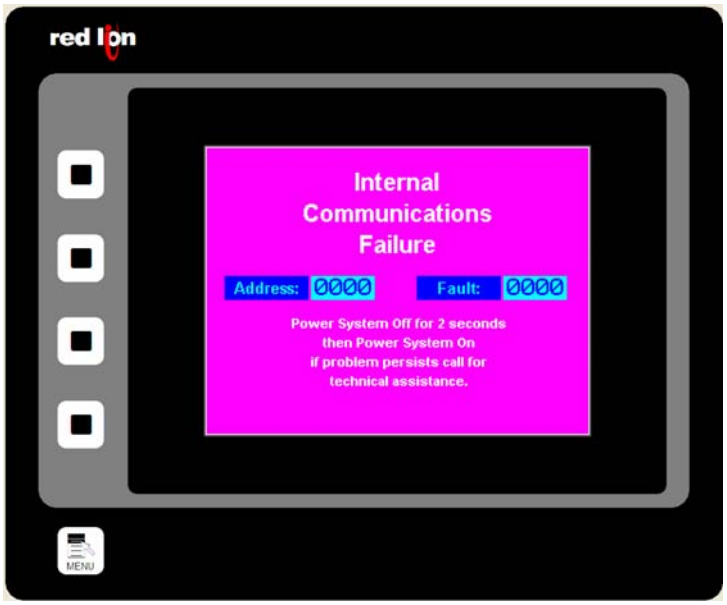
This button determines the water level used when filling the tumble chiller. The word “High” will alternate with “Medium” as this button is pressed.

Pressing this button will cause the tumble chiller to open the floor drain valve. This is only operational when the system is stopped.

Pressing this button will cause the tumble chiller to pump the drum water to the reservoir tank for reuse in the next operation. This is only operational when the system is stopped. The “Fill Tank from City Water” icon will be removed from the screen.

This button can be used to rotate the drum when the system is not active.

Internal Communications Fault Screen



Should a fault occur between the programmable logic controller and temperature or level sensors this screen will automatically be displayed. The operator should record the address number and the fault code before following the instructions on the screen. Normally, just restarting the system should reset the faults unless there is a hardware failure.