

ZERO ZONE

# Basic Guide to Understanding the E2 Controller

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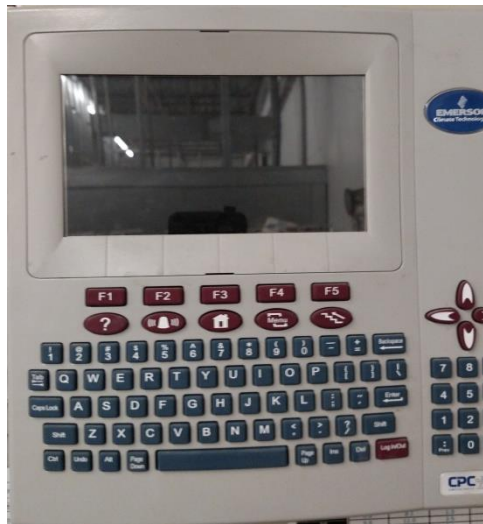
# Basic E2 Guide

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# Getting Started

- The controller should be blank when first walking up to it.
- Pressing the  (Home Button) will light the screen up and show the Home screen.
- The  (Home Button) will always take you to the Home Screen no matter where you are in the menus.








**Home Screen**

LEGEND	
1	Lighting
2	HVAC Control
3	Refrigeration
4	Demand Control
5	Advisory Information
6	Network Information
7	Anti-Sweat
8	Controller Information
9	Time Schedules
10	Sensor Control

(Image from E2 Manual)

# Logging In

- Pressing the  Log in/Log out key in the bottom right corner of the keyboard will bring up the Log in screen.
- Using the key board enter the Username and the press the  (Enter button). Then type the Password and hit the  (Enter button).
- User Name: REFRIG
- Password: R404A
- When logged in a  icon will appear in the top left corner on the screen on the header.
- Pressing the  key again after being logged in will log the user out

User Login

Username:

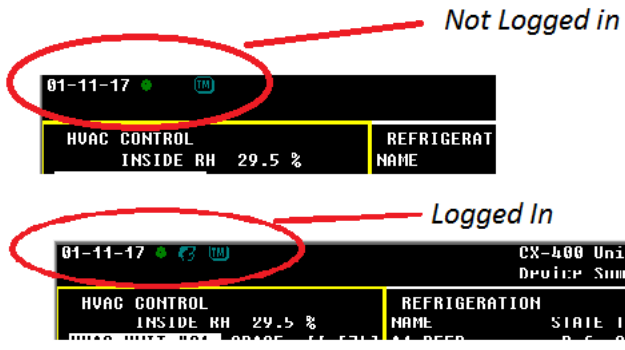
Password:

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All rights reserved.

This product and system, including protocols, user interface and algorithms, is protected by copyright law, intellectual property law and international treaties.

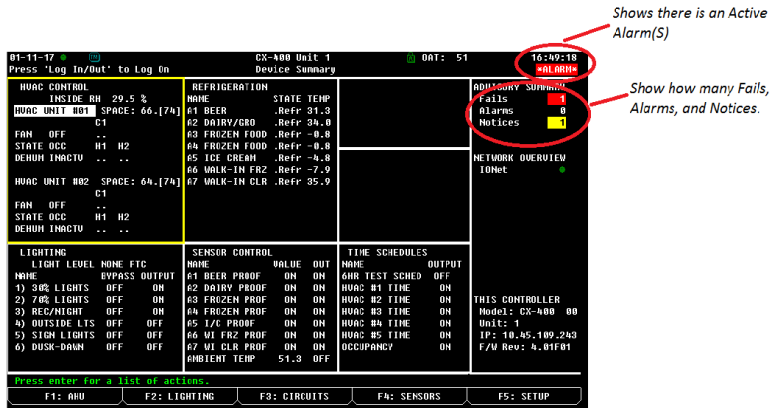
Icon	Description
	Single user is logged in
	Multi-users are logged in
	Terminal mode in use
	E2 is connected to Ethernet
	Wait, or system is busy
	Disk activity, or saving to disk
	Caps lock is ON

(Image from E2 Manual)

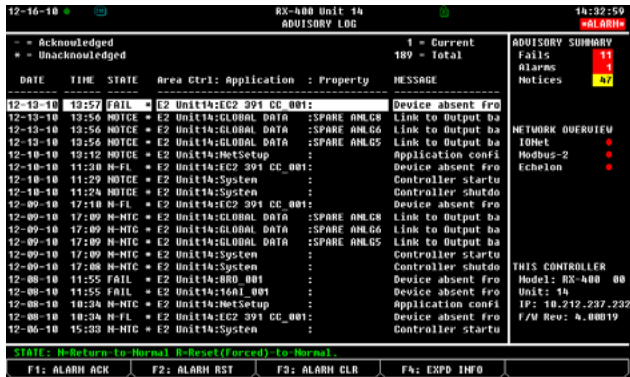


# Alarms

- The upper Right corner of the Home screen will show if there are active alarms
- Alarm States as per the E2 Manual
  - ALARM - A high-priority warning, usually signifying a condition that requires attention.
  - NOTICE - A low-priority message, usually signifying a condition or a system change that requires no attention or may require attention in the future.
  - FAIL - A failure is a special message that signifies a failure in an E2 system, an application, or in an input or output device controlled by an application (such as a sensor or fan)

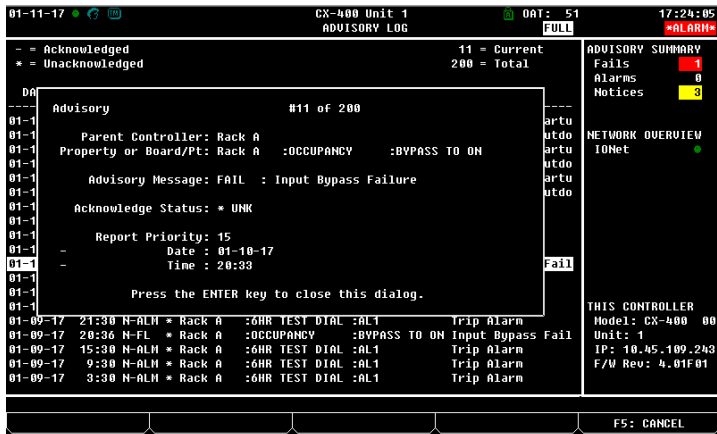


- To view the full list of alarms (Alarm Button). This will bring up the Alarm Menu.



- This menu will show the time, date and what is in alarm.
- The state show if it is still in alarm, returned to normal or was forced to normal

- To view more detail on the alarm press the **F4** button.



- Return-To-Normal** – The condition that created the alarm, noticed or failure has returned to normal on its own. The alarm state will show “N-“in front of it.

- Reset (Forced)-To-Normal** – The alarm condition was reset. This occurs when using the **F2** button. The alarm state will show “R-“before it.

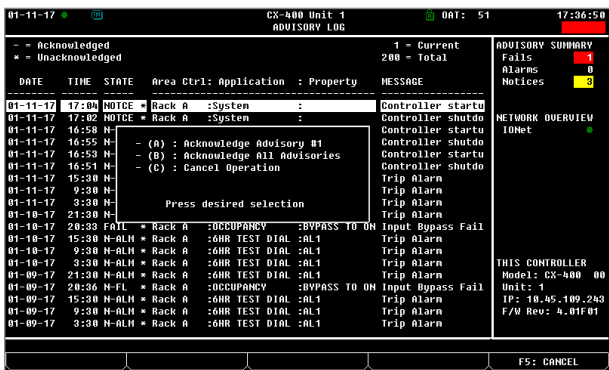
Alarms State

Advisory Type	Condition Still Exists	Condition Returned To Normal	Condition Reset to Normal
Alarms	ALARM	N-ALM	R-ALM
Notices	NOTICE	N-NTC	R-NTC
Failures	FAIL	N-FL	R-FL

(Image from E2 Manual)

### Alarm Acknowledge and Resetting

- When Acknowledging or Resetting the alarms there will be 3 options



- (A) Acknowledge/Reset selected advisory
- (B) Acknowledge/Reset All advisories in Alarm Log
- (C) Cancel operation

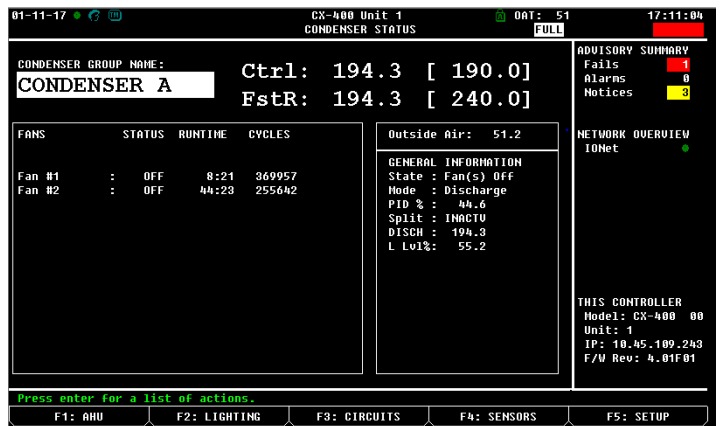
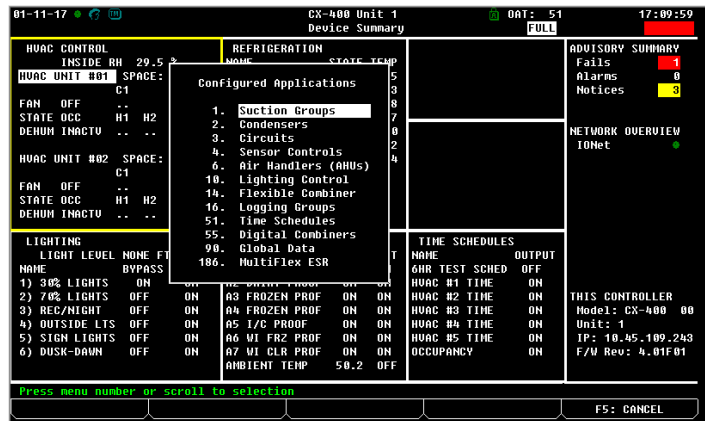
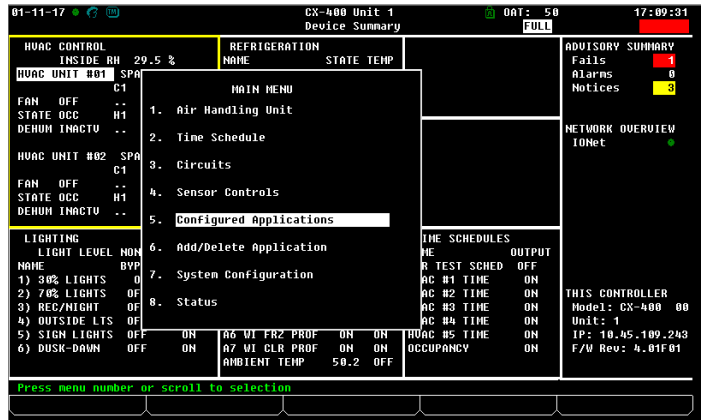
### Acknowledging Alarms

- Acknowledging alarms will stay in the alarm log but are silenced and will not realarm until the Alarm is reset.
- To Acknowledge an alarm press the **F1** button while on the alarm screen







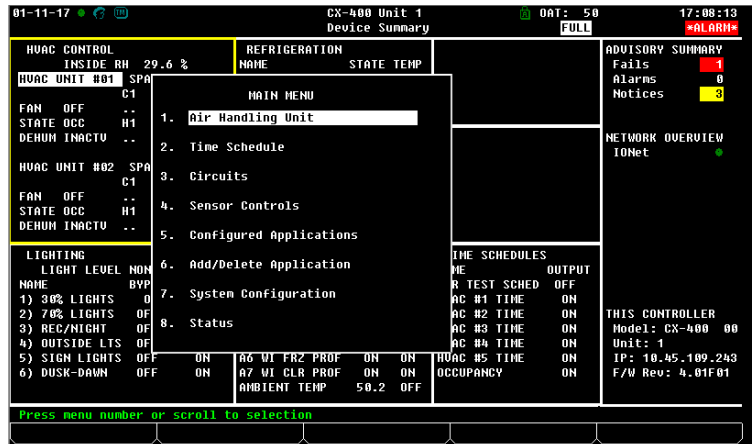
# Viewing Condenser Screen

- From any Screen press the **Menu** button
- Use the Arrow keys on the keyboard to scroll down to (5. Configured Applications) and press the **Enter** key or press the **%5** key
- Use the down arrow once and hit **Enter** or press the **@2** key (2. Condenser)
- The Condenser Screen Shows
  - Discharge Pressure
  - Discharge Set Point
  - Fan Status
  - Split Status
  - Out Side Air temp
  - Liquid Level



# Viewing Circuits

- From any Screen press the  button  
Use the Arrow keys on the keyboard to scroll down to (3.Circuits ) and press .
- Another way to get to the Circuits is from the Main Screen Press .
- This Screen will show a List of the circuits along with the status of the circuit.
- For more detailed information on the circuit use the arrow keys to highlight the circuit and then press the  key
- This screen will show
  - Average case temp
  - All the sensors temperatures in the circuit
  - The EEPR valve Status
  - Fan Status
  - Refrigeration Status
  - Defrost Status
  - It will also show the highest temperature that accrued during defrost



01-11-17 CX-400 Unit 1 OAT: 50 17:08:13  
Device Summary FULL ALARM

HVAC CONTROL INSIDE RH 29.6 %  
HVAC UNIT #01 SPA C1  
FAN OFF --  
STATE OCC H1  
DEHUM INACTU --

HVAC UNIT #02 SPA C1  
FAN OFF --  
STATE OCC H1  
DEHUM INACTU --

REFRIGERATION NAME STATE TEMP

MAIN MENU  
1. Air Handling Unit  
2. Time Schedule  
3. Circuits  
4. Sensor Controls  
5. Configured Applications  
6. Add/Delete Application  
7. System Configuration  
8. Status

LIGHTING LIGHT LEVEL NON  
NAME BVP  
1) 30% LIGHTS 0  
2) 70% LIGHTS 0F  
3) REC/NIGHT 0F  
4) OUTSIDE LTS 0F  
5) SIGN LIGHTS 0F  
6) DUSK-DAWN 0F

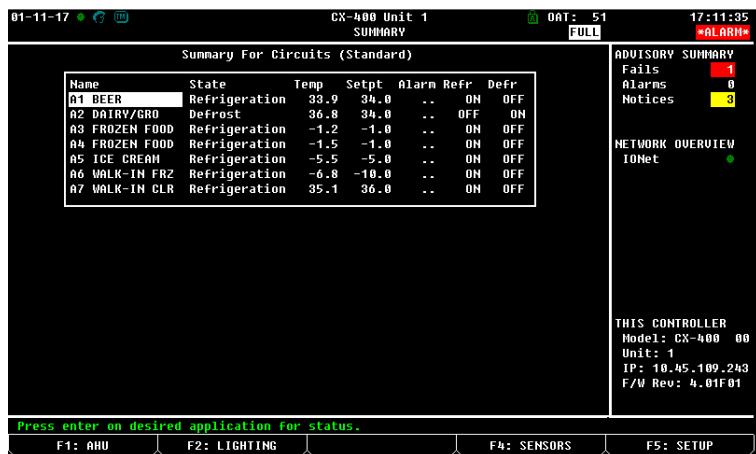
TIME SCHEDULES  
ME OUTPUT  
R TEST SCHED OFF  
AC #1 TIME ON  
AC #2 TIME ON  
AC #3 TIME ON  
AC #4 TIME ON  
AC #5 TIME ON  
OCCUPANCY ON

ADVISORY SUMMARY  
Fails 1  
Alarms 0  
Notices 3

NETWORK OVERVIEW  
IONet

THIS CONTROLLER  
Model: CX-400 00  
Unit: 1  
IP: 10.45.109.243  
F/W Rev: 4.01F01

Press menu number or scroll to selection



01-11-17 CX-400 Unit 1 OAT: 51 17:11:35  
SUMMARY FULL ALARM

Summary For Circuits (Standard)

Name	State	Temp	Setpt	Alarm	Refr	Defr
A1 BEER	Refrigeration	33.9	34.0	..	ON	OFF
A2 DAIRY/GRD	Defrost	36.8	34.0	..	OFF	ON
A3 FROZEN FOOD	Refrigeration	-1.2	-1.0	..	ON	OFF
A4 FROZEN FOOD	Refrigeration	-1.5	-1.0	..	ON	OFF
A5 ICE CREAM	Refrigeration	-5.5	-5.0	..	ON	OFF
A6 WALK-IN FR2	Refrigeration	-6.8	-10.0	..	ON	OFF
A7 WALK-IN CLR	Refrigeration	35.1	36.0	..	ON	OFF

ADVISORY SUMMARY  
Fails 1  
Alarms 0  
Notices 3

NETWORK OVERVIEW  
IONet

THIS CONTROLLER  
Model: CX-400 00  
Unit: 1  
IP: 10.45.109.243  
F/W Rev: 4.01F01

Press enter on desired application for status.

F1: AHU F2: LIGHTING F4: SENSORS F5: SETUP



01-11-17 CX-400 Unit 1 OAT: 50 17:12:10  
STANDARD CIRCUIT FULL

Standard Circuit Name:  
A1 BEER

Temp : 34.1 [ 34.0]  
State: Refrigeration

SPECIAL INPUTS

INDIVIDUAL TEMPERATURES  
Case Product Termination  
1 : 35.4  
2 : 33.2

OUTPUTS  
Fans : ON  
Refrig Solenoid: ON  
Defrost : OFF  
EEPR Valve: 11.1%

OTHER INFORMATION  
Bypass State : NORMAL  
Alarm Out : --  
Peak Temp During Defr: 40.9

ADVISORY SUMMARY  
Fails 1  
Alarms 0  
Notices 3

NETWORK OVERVIEW  
IONet

THIS CONTROLLER  
Model: CX-400 00  
Unit: 1  
IP: 10.45.109.243  
F/W Rev: 4.01F01

Press enter for a list of actions.

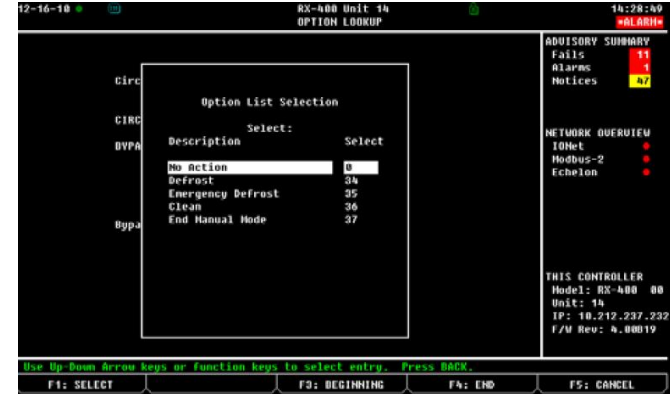
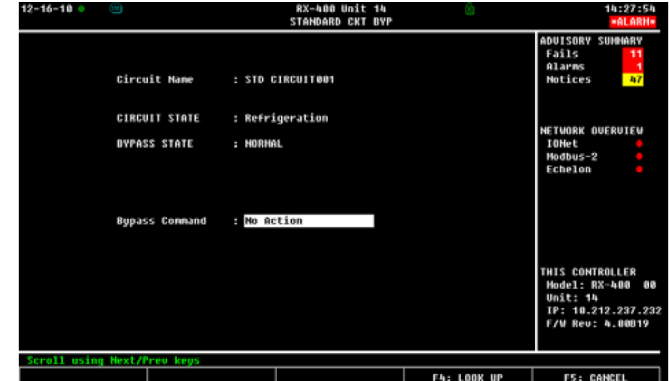
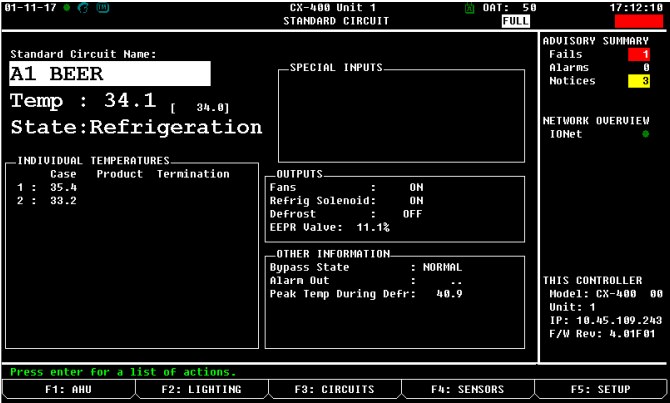
F1: AHU F2: LIGHTING F3: CIRCUITS F4: SENSORS F5: SETUP



# Manual Defrosting

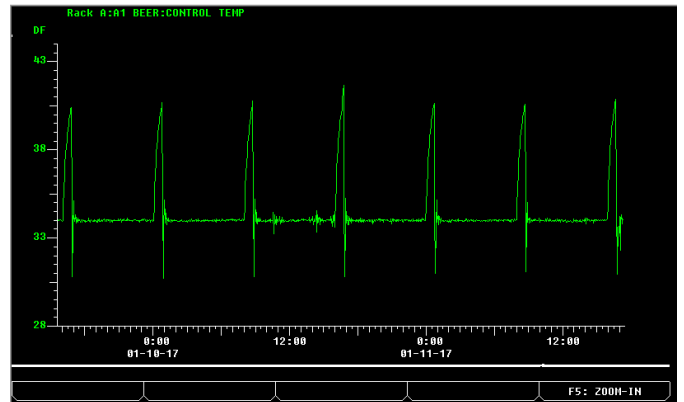
In some cases it is necessary to check the defrost operation.

- In the Circuit menu highlight the circuit name and press the **Enter** key. This will bring up the Actions Menu
- Use the arrow keys to scroll down to Manual Defrost or press the number **7** key to bring up the Manual Defrost menu
- Press the **F4** key to bring up the Bypass options.
- Use the arrow keys to scroll through the options. Also typing the corresponding number will jump to that action.
  - No Action: Normal state
  - Defrost: Normal Defrost. The defrost will terminate base of the controller settings or termination time.
  - Emergency Defrost : Will run the full length of the defrost time. Will not terminate on temperature.
  - Clean: Will Disable both refrigeration and defrost so the case can be cleaned
  - End Manual Mode: Will end any defrost or clean cycle that was started manually



# Logging/Graphing

- To view logs/graphs of a input or output highlight the desired input or output and press **Enter**. This will bring up the Actions Menu
- To view a graph of the input/output press **Enter** or the **1** key.
  - Pressing the **F5** key will zoom in to the latest section of the graph
  - Use the Arrow keys to scroll through the time frame on the graph
  - Pressing the **F4** key will zoom out.
- To view a Log of the input/output use the arrow keys to scroll down to Log and press **Enter** or the **@** key
  - Use the Arrow keys to scroll up and down the time frame.
  - Use Page up and Page down keys to move through the pages of time frames.
  - Pressing **F1** will bring the cursor to the top of the table
  - Pressing **F2** will bring the Cursor to the bottom of the table



The screenshot shows the 'Point Log' table with the following data:

Date	Time	Point:
NONE	NONE	DF
01-11-17	17:20:00	34.0
01-11-17	17:27:00	34.0
01-11-17	17:24:00	34.0
01-11-17	17:21:00	34.1
01-11-17	17:18:00	33.8
01-11-17	17:15:00	34.3
01-11-17	17:12:00	34.0
01-11-17	17:09:00	32.3
01-11-17	17:06:00	34.2
01-11-17	17:03:00	33.1
01-11-17	17:00:00	33.5
01-11-17	16:57:00	32.5
01-11-17	16:54:00	33.6
01-11-17	16:51:00	30.9
01-11-17	16:48:00	35.2
01-11-17	16:45:00	40.9
01-11-17	16:42:00	40.6
01-11-17	16:39:00	40.5
01-11-17	16:36:00	40.1

The bottom of the screen shows 'Sample Number: 1 / 1000' and function keys: F1: BEGINNING, F2: END, F3: GRAPH, F4: UPDT DATA, F5: EXPD INFO.

# Viewing Network Summary

- From any Screen press the **Menu** button
- Use the Arrow keys on the keyboard to scroll down to (7. System Configuration) and press the **Enter** key or press the **&7** key
- Use the Arrow keys on the keyboard to scroll down to (7. Network Setup) and press the **Enter** key or press the **&7** key
- Press **Enter** or the **1** key to enter the Network Summary screen
- The Network Summary screen shows all the connected boards to the controller. This also shows if the boards are online or offline.

