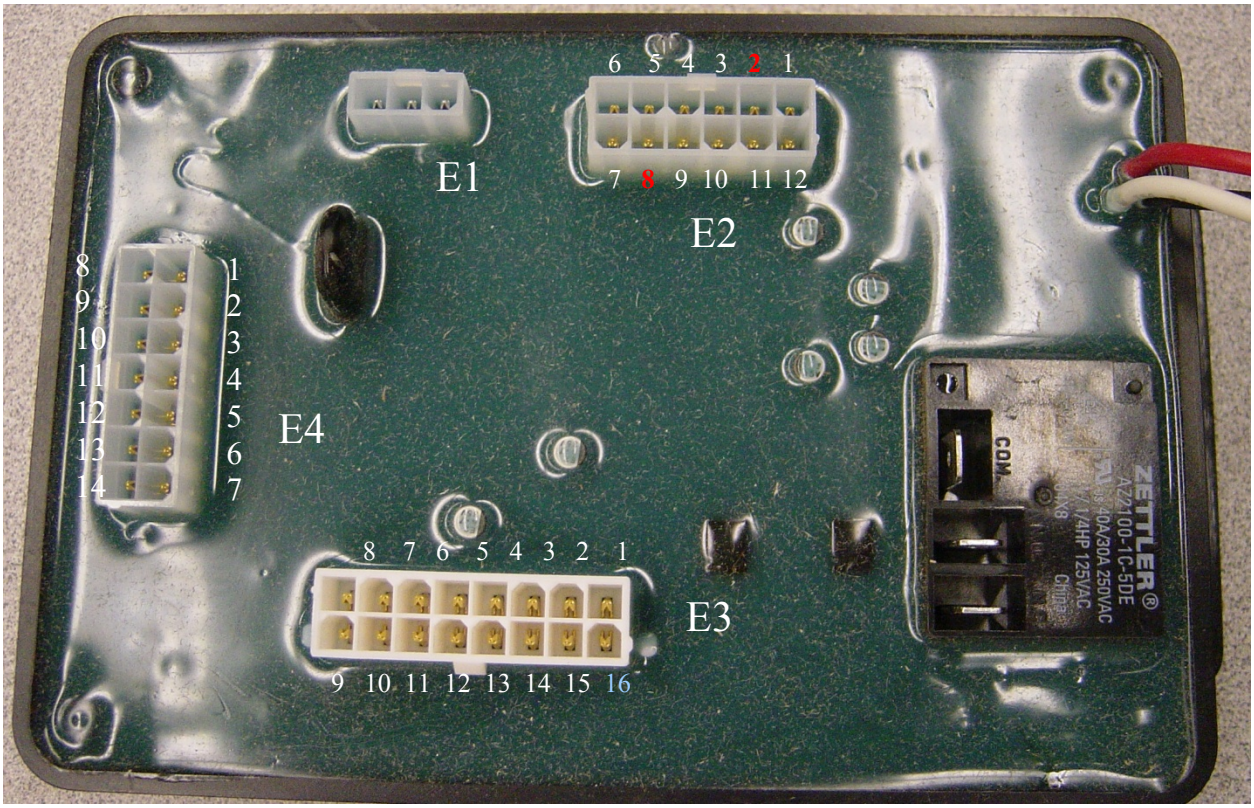
VCWB300 Wine Cellar – Service Sheet

- When cooling is called for, Zone Valve will energize and compressor will come on 60 seconds later.
- Only ONE Zone at a time will operate. (Fan and Valve)
- Top Chamber is 1st, then center, then the lower chamber is 3rd. (In that order).
- Each Zone will run for a maximum of 10 minutes, then switch to the next
- When Set Temperature is reached (less 1°), the valve will de-energize
- When set temperature is 5° higher than set temp for longer than two hours, the alarm will sound
- Press and Hold **Display On/Off** and **Alarm** for 5 seconds changes the display from F° to C° and back again
- The **Sabbath Mode** is activated by Pressing and Holding **Display On/Off** pad for 10 seconds will activate the Sabbath mode. Repeat steps to disable Sabbath mode.
- The **Service Mode** is activated by Pressing and Holding **Zone, Higher Temp and Light** pads simultaneously for 5 seconds. The word TEST will be displayed and valve 1 will energize for 10 seconds to relieve any pressure in the system. The compressor then starts. Each push of the Zone pad will energize the Valve and Fan for that chamber. Repeat steps to disable Service mode.
- While in the Service mode, if you push the **Lower Temp** pad, this will shut off the compressor and fans but will activate all three zone valves. This is called the **Charge mode** and is helpful during a sealed system repair.
- The lower temperature attainable is 43° F (6° C)
- Unit comes set at the factory for the top and center zones set to 43° F (6° C) and the bottom zone set for 55° F (12.7°C)
- During manufacturing, the capillary tubes are identified by using clear tape to mark which tube goes to which zone.

a)	Cap tube with **1** piece of tape:	Top Evaporator
b)	Cap tube with **2** pieces of tape:	Center Evaporator
c)	Cap tube with NO tape:	Bottom Evaporator



E1 Display Board Send
1 +5Vdc
2 data signals
3 ground

E2 Touch switch inputs (with switches connected), typical
1 +5VDC
2 Ground Common for measurements on E2
3 Not connected
4 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.
5 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.
6 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.
7 +5Vdc
8 Ground Common for measurements on E2.
9 Not connected.
10 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.
11 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.
12 When button is touched +4Vdc to +5Vdc, otherwise less than +1Vdc.

E3 Outputs and line voltage inputs (loads connected) typical.
1 Showroom switch off = 0V, on = 120VAC
2 – 7 Not connected.
8 Door switch open = 0V, closed = 120VAC.
9 When Upper Zone Coil is being cooled or service mode = 115 VAC , off = 0V
10 When Center Zone Coil is being cooled or service mode = 115 VAC , off = 0V
11 When Bottom Zone Coil is being cooled or service mode = 115 VAC , off = 0V
12 When Upper Zone Fan is being cooled or service mode = 115 VAC , off = 0V
13 When Center Zone Fan is being cooled or service mode = 115 VAC , off = 0V
14 When Bottom Zone Fan is being cooled or service mode = 115 VAC , off = 0V
15 For zone lights = 115 VAC , off = 0V
16 Power line neutral. Common for all E3 measurements.

E4 Thermistor inputs (measured with thermistor disconnected).

1 to 8	3 to 4.5 VDC – TE2 (Evaporator Thermistor Center)
2 to 9	3 to 4.5 VDC – TC1 (Compartment Thermistor Upper)
3 to 10	3 to 4.5 VDC – TE1 (Evaporator Thermistor Upper)
4 to 11	3 to 4.5 VDC – TC3 (Compartment Thermistor Lower)
5 to 12	3 to 4.5 VDC – TE3 (Evaporator Thermistor Lower)
6 to 13	3 to 4.5 VDC – TC2 (Compartment Thermistor Center)
7 to 14	3 to 4.5 VDC

Compressor Relay (use E3 – 16 as common for measurements)
Com 115 VAC continuous (power line supply).
NO 115 VAC when compressor is running.
NC Not connected.

Alarm wires (check for continuity – these are contact closures only)
Black Common
Red Normally closed (in no – alarm condition)
White Normally open (in no – alarm condition)

Display Board
(IDB5D –4330)

E1 Display Board receive
1 +5VDC
2 data signals
3 ground

E2 Futaba VFD display data connection
TE = Thermistor / Evaporator -- Cut-in (39°F minimum) for Evaporator Temperature
TC = Thermistor / Compartment – Compartment cut-out Temperature.
Thermistor Tolerance ± 2 degrees.