# JTL CABINET CONTROLLER ITEM NUMBERS — LCNB

| ITEM | DESCRIPTION | CODE | CODE MEANING | BIT 4321 | RANGE | ITEM 9 VALUE |
|---|---|---|---|---|---|---|
| 0 | Unit type | Lcnb | Unit type | | | |
| 1 | Unit number | | | | 0.1 - 899.9 | |
| 2 | Time of day | | | | 00:00 - 23:59 | |
| 6 | Communications speed | 600<br>4800 | Baud rate<br>Baud rate | | | |
| 8 | Bitswitch setting | | | | | |
| 9 | Set default<br>values selected by Bitswitch | | | | 0 - 1 | |
| | **PROCESSOR ALARMS** | | | | | |
| 10 | Processor<br>alarms (11 - 17) | 0<br>1-255 | No alarms<br>Check 11 - 17 | | | |
| 11 | Static RAM<br>Fault | CLr<br>rA.Ft | No fault<br>Fault | | | |
| 12 | Program/counter fault | CLr<br>PC.Ft | No fault<br>Fault | | | |
| 13 | Stack pointer fault | CLr<br>SP.Ft | No fault<br>Fault | | | |
| 14 | Background loop fault | CLr<br>bL.Ft | No fault<br>Fault | | | |
| 15 | PROM checksum fault | CLr<br>Pr.Ft | No fault<br>Fault | | | |
| 16 | NVRAM fault | CLr<br>n.Ft | No fault<br>Fault | | | |
| 17 | Instruction TRAP fault | CLr<br>tP.Ft | No fault<br>Fault | | | |
| | **MISCELLANEOUS DATA** | | | | | |
| 19 | Software Version number | | | | | |
| | **TEMPERATURES** | | | | | |
| 20 | Estimated cabinet temperature (calculated from Air on and Air off temperatures) | | | | | |
| 21 | Air on temperature | | | | | |
| 22 | Air off temperature | | | | | |
| 23 | Evaporator temperature | | | | | |
| 24 | Suction line temperature | | | | | |
| 25 | Superheat (Evaporator temp - suction line temp) | | | | | |
| | **AVERAGE ERRORS** | | | | | |
| 26 | Average cabinet temperature error | | | | | |
| 27 | Average Air off temperature error | | | | | |
| | **AUTOMATICALLY ADJUSTED SETPOINTS** | | | | | |

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| **ITEM** | **DESCRIPTION** | **CODE** | **CODE MEANING** | **BIT**<br>**4321** | **RANGE** | **ITEM 9 VALUE** |
| 28 | Current Air off temperature setpoint (calculated by controller) | | | | | |
| 29 | Current Evaporator temperature setpoint (calculated by controller) | | | | | |
| **PRIMARY TEMPERATURE SETPOINTS** | | | | | | |
| 30 | Cabinet temperature setpoint (target for item 20) | | | xxCC<br>xxCO<br>xxOC<br>xxOO | - 30 to -15<br>- 30 to -15<br>- 5 to +10<br>- 5 to +10 | - 20<br>- 26<br>+1<br>+4 |
| 31 | Air off setpoint (starting point and lower limit for item 28) | | | xxCC<br>xxCO<br>xxOC<br>xxOO | - 39 to -20<br>- 39 to -20<br>- 10 to +5<br>- 10 to +5 | - 30<br>- 36<br>- 6<br>- 4 |
| 32 | Overtemperature alarm tolerance | | | xxCC<br>xxCO<br>xxOC<br>xxOO | 0 - 20<br>0 - 20<br>0 - 20<br>0 - 20 | 10<br>10<br>5<br>10 |
| 33 | Cabinet temperature ratio (Item 20 calculated as value between Air off and Air on using this ratio) | | | xxCC<br>xxCO<br>xxOC<br>xxOO | 20 - 80<br>20 - 80<br>20 - 80<br>20 - 80 | 50<br>50<br>40<br>60 |
| **PROBE SELECTION** | | | | | | |
| 36 | Air on probe selection | OFF<br>AO.En | Disabled<br>Enabled | | 0 - 1 | AO.En |
| 37 | Air off probe selection | OFF<br>AF.En | Disabled<br>Enabled | | 0 - 1 | AF.En |
| 38 | Evaporator probe selection | OFF<br>EP.En | Disabled<br>Enabled | | 0 - 1 | EP.En |
| 39 | Suction line probe selection | OFF<br>SP.En | Disabled<br>Enabled | | 0 - 1 | SP.En |
| **DEFROST INFORMATION** | | | | | | |
| 40 | Duration of last defrost | | | | | |
| 41 | Time since end of last defrost | | | | | |
| 42 | Duration of current defrost | | | | | |
| 44 | Power off duration | | | | | |
| 45 | Suction line or Comms initiated defrost selection | CU.In<br><br>SL.In | Comms unit initiated<br>Suction line temp initiated | | 0 - 1 | SL.In |
| 46 | Comms unit initiated defrost command status | P.dEF<br>F.dEF<br>0 | Pack on defrost<br>Pack on forced defr<br>Pack not on defrost | | | |

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| **MISCELLANEOUS SETTINGS** | | | | | | |
| 47 | Period over which averages are taken | | | | 00:30 - 03:00 | 01:00 |
| 48 | Max starts/hour<br>(Anti-shortcycling timer when using liquid valve relay to control a condensing unit) | 0<br>10.PH<br>15.PH<br>20.PH | No limit<br>10 starts per hour<br>15 starts per hour<br>20 starts per hour | | 0 - 3 | 0 |
| 49 | Liquid hold-off time<br>(Initiated by the voltage free contact input - Item 71 or the comms defrost command) | | | | 00:00 - 00:10 | 00:00 |
| **DEFROST SETPOINTS** | | | | | | |
| 50 | Defrost termination temperature<br>(Air off probe) | | | xxCC<br>xxCO<br>xxOC<br>xxOO | 0 - 20<br>0 - 20<br>0 - 20<br>0 - 20 | 15<br>15<br>12<br>20 |
| 57 | Defrost termination time limit | | | xxCC<br>xxCO<br>xxOC<br>xxOO | 00:05 - 00:40<br>00:05 - 00:40<br>00:10 - 01:00<br>00:10 - 01:00 | 00:20<br>00:20<br>00:20<br>00:40 |
| 58 | Defrost initiation temperature (suction line probe) | | | xxCC<br>xxCO<br>xxOC<br>xxOO | - 5 - 20<br>- 5 - 20<br>0 - 20<br>0 - 20 | 0<br>0<br>+15<br>+10 |
| 69 | Number of defrosts expected per day | 0<br>1 - 6 | Disable alarm 94<br>Alarm enabled | | 0 - 6 | 3 |
| **MODES, INPUTS AND OUTPUTS** | | | | | | |
| 70 | Operating mode | rEFr<br>dEFr<br>dF.rc | Refrig.<br>Defrost<br>Defrost recovery | | | |
| 71 | Defrost input | oFF<br>dF.IP | No defrost Defrost<br>contacts closed | | | |
| 72 | Defrost relay | o or OFF<br>dt.on<br><br>dc.on | Relay deenergised<br>Defrost termination on<br>Defrost control on | | | |
| 73 | Liquid solenoid relay | OFF<br>LS.on | Off<br>Demanding refrig. | | | |
| 74 | FANS/Heater relay | O<br>Fn.on<br>Hr.on | Off<br>Fans on<br>Heater on | | | |
| 75 | Defrost relay mode selection | d.tEr<br>d.Con | Defrost termination<br>Defrost control | | 0 - 1 | d.tEr |

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| | **FORCING FUNCTIONS**<br>Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged. | | | | | |
| 77 | Forced defrost | OFF<br>Fd.on | Off<br>Forced defrost on | | 0 - 1 | |
| 78 | Inhibit defrost | OFF<br>no.dF | Off<br>No defrosts | | 0 - 1 | |
| 79 | Forced refrigeration | OFF<br>Fr.on | Off<br>Forced refrigeration | | 0 - 1 | |
| | **SYSTEM ALARMS** | | | | | |
| 80 | Group alarm 81 - 88 | 0<br>1 - 255 | No alarms<br>Check 81 - 88 | | | |
| 81 | Cabinet overtemperature | CLr<br>C.Ht | No fault<br>Fault | | | |
| 82 | Air off overtemperature | CLr<br>A.Ht | No fault<br>Fault | | | |
| 83 | Air on probe fault | CLr<br>AO.Pr | No fault<br>Fault | | | |
| 84 | Air off probe fault | CLr<br>AF.Pr | No fault<br>Fault | | | |
| 85 | Thermistor power supply fault | CLr<br>PS.Ft | No fault<br>Fault | | | |
| 87 | Unit number corrupted/not set | CLr<br>Un.CF | No fault<br>Fault | | | |
| 88 | All probes faulty, deselected or disconnected | CLr<br>t.SEn | No fault<br>Fault | | | |
| | **MISCELLANEOUS DATA** | | | | | |
| 89 | Thermistor excitation value (Factory test) | | Not used | | | |
| | **SYSTEM ALARMS** | | | | | |
| 90 | Group alarm 91 - 98 | 0<br>1 - 255 | No alarms<br>Check 91 - 98 | | | |
| 92 | Evaporator probe fault | CLr<br>EP.Pr | No fault<br>Fault | | | |
| 93 | Suction line probe fault | CLr<br>SL.Pr | No fault<br>Fault | | | |
| 94 | Expected defrosts have not been detected | CLr<br>dEF.F | No fault<br>Fault | | | |
| 95 | Lighting control Over ride operated | v0.00.0 (LCNB00) only) | | | | |
| | | CLr<br>L.or | No fault<br>Over ride on | | | |

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| **UTILITY** | | | | | | |
| 99 | Test digital display | CLr<br>SEt | Not active<br>Test active | | 0 - 1 | |
| **COMPRESSOR PACK DATA** | | | | | | |
| 101 | Air off setpoint for compressor pack | | | | | |
| **MISCELLANEOUS SETTINGS** | | | | | | |
| 102 | Probe type selection | 5000<br>2000 | Tempkey<br>ELM | | 0 - 1 | 5000 |
| 104 | Auxiliary output selection | 0<br>Fan.s<br>Htr.s | Not used<br>Fan control<br>Heater | | 0 - 3 | Not used |
| **LIGHTING CONTROL** | | | | | | |
| 110 | Select lighting control | OFF<br>LC.on | off<br>Lighting control function selected | | 0 - 1 | LC.on |
| 111 | Lighting unit command | LU.Co<br><br>0 | Lighting off command<br>Clear | | | |
| 112 | Over ride input | OFF<br>L.O.IP | No input<br>Over ride input on | | | |
| 113 | Lights and blinds | on<br><br>L.OFF | Lights on and blinds up<br>Lights off and blinds down | | | |
| **FORCING FUNCTIONS**<br>Forced functions remain forced if the Maintenance Unit remains plugged in. They are automatically cancelled 30 minutes after the Maintenance Unit is unplugged. | | | | | | |
| 114 | Force lights on | OFF<br>L.on | Off<br>Lights on | | 0 - 1 | |
| 115 | Force lights off | OFF<br>L.OFF | Off<br>Lights off | | 0 - 1 | |
| **LIGHTING CONTROL LCNB02 on (v0.00.2 on)** | | | | | | |
| 116 | Manual lights on | OFF | Not used | | | |
| 117 | Manual lights off | OFF | Not used | | | |
| 118 | Lighting contractor type selection (shown for lights-on state) | n.o<br>n.c | normally open<br>normally closed | | 0 - 1 | n.c |
| 120 | Lighting override timer (time delay before lighting off/blinds close on manual control) | | Not used | | 00:30 - 02:00 | 02:00 |
| **DISPLAY PUSHBUTTONS LCNB02 on (v0.00.2 on)** | | | | | | |
| 121 | Display pushbutton 1 Status | OFF | Not used | | | |
| 122 | Display pushbutton 2 Status | OFF | Not used | | | |

## BITSWITCH SETTINGS

4321
xx**CC** Frozen food
xx**CO** Ice cream
xx**OC** Chiller
xx**OO** Produce

where **C** = **C**LOSED or ON
O = OPEN or OFF
x = Don't care

Note 1: For unmarked switches
C = dot visible
O = dot not visible
Note 2: Setting the bitswitches alone has no effect.
Use **ITEM 9** to set the default values after the switches are set.

| DISPLAY DATA | LCNB |
|---|---|
| **NORMAL DISPLAY** | |
| - 99$^{c}$ | Cabinet temperature (item 20 rounded) |
| dEF | Defrost |
| dEFr | Defrost recovery |
| -- | Display data error |
| **ALARM TEXT (in descending priority order)** | |
| t.SEn | All probes faulty, deselected or disconnected |
| Ht | High cabinet or air off temperature |
| **OTHER TEXT** | |
| JTL | Start-up text |