JTL FIRMWARE VARIATIONS		LCNS
VERSION	**DESCRIPTION**	**DATE**
v0.00.2	Original issue	Jul 94
v0.00.3	Upgraded as a universal spare to replace LCED, LCGD, LCNB, RCAS, RCCN, RCGD Fans delay after defrost added on item 109. Display pushbutton test (item 121) amended. Defrost strategy (item 107) added. Defrost relay mode (item 75) default changed to control. Time termination strategy added. Watchdog restart information available on network communications. Temperature choice for display added for Celsius and Fahrenheit on item 122. New library software used by executive. Daylight saving operation added using choice on item 18. Maintenance unit display text improved in line with new software library features. NVRAM write handling amended to write to memory after 2 minute delay. Item 9 operation enhanced by allowing NVRAM write without delay by setting value to "1066" Network communication failure alarm added on item 252. Network defrost failure mode enhanced to give choice of learned defrost or fixed schedule. Learned defrost correctly activated in event of plant communications fail. Learned defrost schedule visible on items 261 - 272. Valve open logging added on items 240 and 241. Factory test date added. Maximum no of defrosts a day alarm extended to 12. Factory information added. Plant data information added on items 211 - 217 for use with Mark 2 optimisers and defrost scheduling. Broadcast "receiving" of site wide data added. Separation of air off and cabinet overtemperature alarms added. Read time defrost added. Network shutdown options added. Invert defrost input option added. Test input option added on item 100. Auxiliary output option added on item 108. Lights off during shutdown added on item 119. Termination sensor option added. Temperature sensor readings shown on items 421-425. PROM option for use on Mk1 & Mk2 pcbs. Factory test comms wake up added.	Apr 2002
v0.00.4	Air off alarm cancelled when no air off sensor selected. Defrost recovery period now lasts for full allowed duration, but when temperature is low enough (as before) dEFr is suppressed on display. Site number recorded. Circuit 0 not allowed on electric defrost data. Unit number range changed to 0.1 to 899.8 Time delay added on detection of defrost scheduler fault before action to override is taken. Network comms initialised to prevent transmit enable on for 10 seconds after power up on Mark 2 boards. Item 412 added to show current defrost strategy in operation. Items 411 & 413 repeat items 107 & 144 for convenience. Temperatures added on items 421 - 427 for test purposes. Note, these temperatures are <u>NOT</u> dependant on sensor selections. Jnet communications level upgraded to 2. Changes to factory settings invokes read of factory data by network controller. Jnet awake enhanced. JTL site number broadcast. Hardware tests fully controllable by network communications. Fan only text on display changed to "OFF" Fans only mode can be selected by pushbuttons on display. Item 214 (414) enhanced to add gas & off cycle defrosts.	Dec 2003