JTL FIRMWARE VARIATIONS		LAPI
VERSION	**DESCRIPTION**	**DATE**
v0.00.0	Development release.	Dec 2007
v0.00.1	PREDICT 1 algorithm replaces PREDICT 3 Error in external PEV override setting corrected.	Jan 2008
V0.00.2	Service log error introduced in v0.00.1 corrected. Choice added for 7 bar transducer on item 175. Bitswitch defaults changed from ice cream to Frozen food for non CO2 use.	Mar 2008
V0.00.3	Refrigerant choice for R404, R408 and R507 operation corrected.	June 2008
v0.00.4	Incomplete external PEV shutdown operation completed.	June 2008
v0.00.5	Control temperature can be selected as air off or cabinet on item 275. Fixed superheat control strategy added, selectable using item 188. Setpoint reuses item 189. Deadband added for temperature control when working with fixed and limited superheat control.	July 2008
v0.00.6	Override freezes control integral PI output modified when on fixed superheat control when superheat less than setpoint. Integral term output displayed on item 276.	July 2008
v0.00.7	Pressure transducer fault ranges now depend on transducer selection. Proportional term displayed on item 277. On fixed superheat control a fixed deadband added above the setpoint where the integral is frozen.	July 2008
v0.00.8	Superheat deadband default changed to 2K. Valve control gain default changed to 5 on HT cases. Valve control time constant default changed to 100 on HT cases. Minimum superheat (pressure) default changed to 3K on HT cases. Fan control defaults to off during defrost on LT cases. Plant alarm added on item 86.	Nov 2008
v0.00.9	No cooling mode added. Time delay added for all sensors faulty alarm. Broadcast timers and multicast data supported. These functions currently unused.	May 2009
v0.01.0	Lighting control will operate by Multicast operation when available on site.	May 2009
v0.01.1	HGD and Well on single evaporator choice added on item 500. HGD section uses second unit number on network set on item 501. Controller can drive 2 JTL displays when using an external 2 display splitter unit.	
v0.01.2	Refrigerant types R422D & R422A added to choices on item 157. Minor adjustments to R404A, R407A and R507A pressure temperature tables. Communications debug feature added on item 967 to display latest unit polled zone.	Oct 2010
v0.01.3	Virtual bitswitch operation added on item 966. Primary frozen food setpoint default changed to -22C Primary frozen food setpoint default changed to -30C Plant data format extended to 13 bit word from 8 bit byte. Circuit number range for plant data increased from 7 to 15 Electrical distribution number added for plant data on item 210 Phase colour info on MU amended. Error in comms depending on item 208 corrected. Parameters download facility added using items 963-965 & 959. MU in use override facility added. Multicast and broadcast flags suppressed from MU when not in use. Lighting override time fixed at 2 hours.	June 2011
v0.01.4	Energy saving feature for fan control discontinued due to memory size restrictions.	June 2011
v0.01.5	Co-ordinated defrost request inhibited during defrost recovery. Network latency used to adjust co-ordinated defrost request.	July 2011

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v0.01.6	Predict operation disabled when transducer readings are faulty. In this situation the defrost initiation defaults to co-ordinated. Network latency calculations adjusted to improve accuracy. Benign error in MU plugged in protocol corrected. Minor adjustments in refrigerant tables for R407B, R408A, R422A and R422D. Download parameter fail status error corrected.	Oct 2011
v0.01.7	Distribution panels reduced to maximum of 7. Electrical circuits increased to maximum of 31.	Dec 2011
v0.01.8	PREDICT 3 added for fixed superheat strategy. PREDICT backup operation for "two temperature" control strategy or invalid superheat, now reverts correctly to co-ordinated defrost. Trim heater cycle period changed from 6 mins 40 secs to 5 mins. Minimum time between defrosts allowed up to 12 hours. Defrost required mode added for display on network clients. .	Mar 2012
v0.01.9	ADC readings added items 560-568 Open and short circuit sensor fault indication added on items 428 & 429 PREDICT 3 volatility calculations amended to allow higher volatility conditions and time between defrosts beyond 64 hours. V to F temperature conversion interrupt handling modified. Items 133-135 available on MU under all circumstances. Previously only available when on network initiated defrost. Password of the day uses daylight time. Minor adjustment to graph interpolation routine. Network plant fault function enhanced to operate with real time defrost strategy. Defrost timer initialisation amended for shut down and fans only operation. PEV pulse width modulation code improved.	July 2012