TECHNICAL MEMORANDUM PRODUCT : PLCS4

No : 0034

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FROM : Russell Kirkwood **DATE** : 27/1/93

TO : ALL AGENTS

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SUBJECT : Firmware revisions with PLCS4 control systems.

1) CPU Firmware versions:

There have been a number of CPU version upgrades for the
original PLCS4 Precision series of controllers. Some of the
changes have been in response to feedback from field testing of
the products and others to allow additional features to be
incorporated into the existing design, this Techmemo sets out a
summary of the versions available up to the current time.

A) Original PLCS4 Versions

V1.0	16/4/91 -	Original version as fitted to the first product. (NO PRODUCTS IN FIELD)
V1.1	20/8/91 -	First full release to market (3 PRODUCTS)
V1.2	27/1/92 -	Improved diagnostics and programmable RH calibration routine.
V1.3	4/3/92 -	Shorter defrost interval when running at high humidities & low temperatures.
V1.4	22/4/92 -	Improved low limit alarm with delay.
V1.5	5/5/92 -	New Diagnostic & calibration routines, Manual CO2 calibration, Ability to disable Alarm, door heater & defrost. 'ON' & 'OFF' for lighting.
V1.6	22/6/92 -	New RS232 computer communication protocols, uses new PLCS4 communication software.
V1.7	1/7/92 -	Better supervisor operation and keeps lights working when changing programs, improved programming interface, no LOW water or HUMIDITY set point adjustments in CO2 version.

The program capacity on the C8 CPU has been reached, the
current CPU version to be used has a larger program capacity
and is designated the 68HC705C9. We have added further
facilities to give enhanced operation and remote diagnostics.

The firmware versions for the new chip are as follows:

    V2.0   11/9/92 - Original release version of the C9
                            firmware.

  V2.1   30/9/92 - First update with new diagnostics
                            passcode.

    V2.2   14/10/92 -Better I/O safety, real time modes

    V2.3   4/11/92 - Manual cycle counter, new COMMS

B)   HARDWARE :

There have been TWO version of the PLCS4 INTERFACE PCB. The
main differences are in the use of the terminal strip types.

    V1.0 -   The original PCB (10 PRODUCTS IN FIELD)

    V2.0 -   Revised layout to fix any problems and to allow
                use of better mains terminal strips, new printer
                connectors.