

CTLI

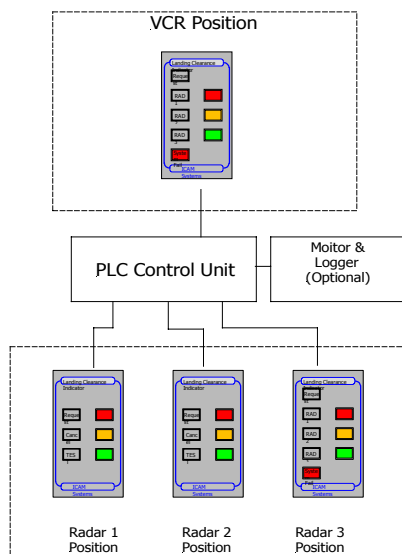
Copperchase – Clearance To Land Indicator (CTLI)

For Airports Of Any Size

The Copperchase Clearance To Land Indicator system features a range of process control products from Schneider Electric.

The PLC core utilises the ultra compact but very powerful Momentum range of PLCs which can be used as a stand alone system for small to medium sized airfield installations, or can be networked using standard RS232 or Modbus plus protocols for Airports where the Approach room is remotely located from the VCR.

The Man Machine Interface (MMI) is in the form of button panels in the VCR and Approach room.



Typical System

The typical system will comprise of a VCR panel with Request indicator/Cancel Button, Audible sounder, Red, Amber & Green button/lamps, RAD 1 & 3 button/lamps and RAD 2 lamp.

The standard system allows for up to 3 Approach panels each with Red, Amber & Green indicators, Request button/indicator & Cancel button/indicator. There is also an audible warning device, which is linked to the red indicator.

The PLC Control Unit can be mounted in any convenient location between Approach and VCR.

Larger systems can be built to suit customer's specific needs.

System Use

In the default state the VCR panel will have no indicators lit. The 3 Approach room panels will all have the Request & Cancel buttons lit.

If an Approach Controller wishes to indicate to the VCR Controller that he has an aircraft that he wants to land he simply presses the request button on his panel.

At this point the other 2 approach panels will be "locked out", this is indicated by the request indicators extinguishing. At the same time the Request indicator in the VCR will illuminate along with the appropriate Radar position indication and an audible alarm will give 2 short "beeps".

The VCR controller can then respond by pressing the Red button (Stop the approach immediately), the Amber button (Continue approach but not yet cleared to land) or the Green button (Clear to Land). The associated indicator on the Approach panel will also illuminate.

The system is cleared down by the initiating Approach Controller pressing the Cancel button. Once an Approach Controller has activated the system, only that Controller can cancel the system.

Designed using state of the art process control equipment

Design inspired by safety-first approach

Modular construction makes the system suitable for most aerodromes

Cuts down on intercom traffic in busy ATC environments

Audible warning associated with "Discontinue Approach" indicator

Other controllers locked-out once system initiated

OPTIONS

Monitoring and Logging packages

User Reports

Monitoring And Logging Packages To Suit All Situations

All systems come as standard with a printer output from the touch-screen giving event and alarm information, all time stamped, even down to alarm acknowledge time.

For the more complex system we offer a Monitoring/Logging package based upon an Industrial class one PC with Microsoft NT workstation operating system. The system can be tailored to suit any logging situation from AGL systems to other ATC or non-ATC applications.

Offering disk storage and database logging components, the system also offers advanced search facilities where investigation of a particular circuit(s) is required subject to a given parameter.

Elapsed time and many other features can be included - just name it!

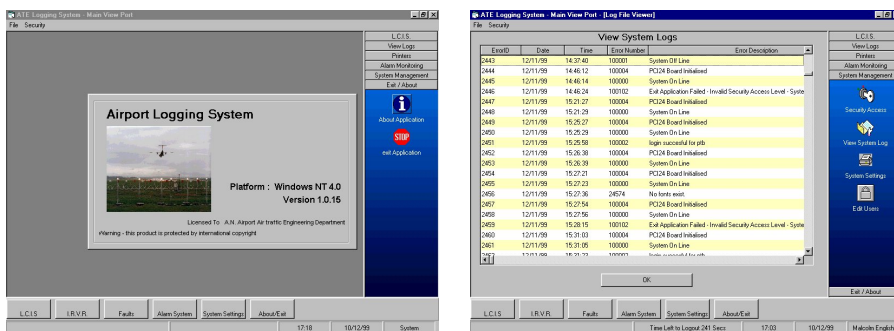
Generate User Reports And Trends (NT Workstation)

Because the software is based upon Microsoft products, information can be shared by applications such as Word and Excel, allowing the generation of reports and spreadsheets etc.

Using Access and/or Excel charts can be generated graphically showing trends within the system.

The system keeps a 30-day running log of events and alarms, after this logs are archived but still available to the Engineering personnel.

The quantity and variation of information can be increased by the addition of OPC Factory Server software. This allows the system to read the register contents of the PLC directly giving the ultimate in information flexibility.

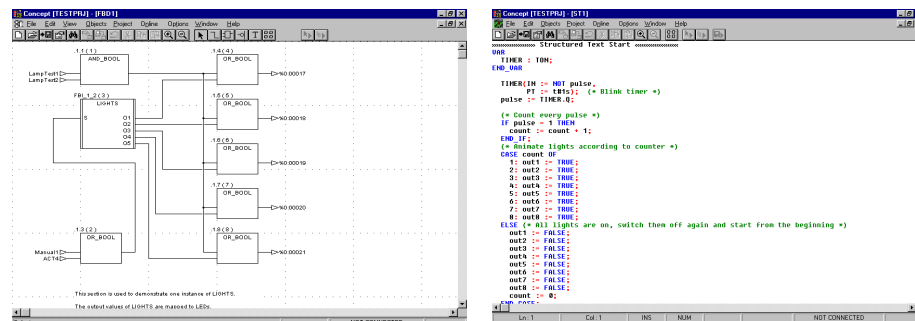


Advanced Lec 1131-3 Languages (Concept)

Both Quantum and Momentum are compliant with all 5 languages of the international IEC 1131-3 language standard. This combination of IEC languages creates a versatile programming environment ideal for ATC systems.

Concept IEC programmes are designed from the outset in a well-documented, structured manner with the source code residing together with the programming PC for secure archiving. Copperchase Systems utilise two of the five IEC standard languages;

Function Block Diagram (FBD) & Structured Text (ST) creating easy to follow program structures.



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System Design Concept Inspired By Safety-First Approach

Both the hardware platform and software application are chosen, produced and combined to provide a safe and easy to use system.

Continuous monitoring of system functionality, from within the system, and independent hardware monitoring offer the high degree of diagnostic coverage expected from a system of this nature.

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