PROCESS CONTROL LANGUAGE & THE PROCESS CONTROL LANGUAGE COMPILER

PROCESS CONTROL LANGUAGE (PCL).

COMSTAR's Process Control Language is an efficient method of programming the COMSTAR 4 microcomputer via a high level language. Inherent in PCL is reduced software costs. Sometimes as much as 50 percent. PCL offers maximum capacity and flexibility for the professional programmer. For the nonprofessional, PCL is easy to understand and use.

PCL allows the process engineer to easily relay his program by way of English language into the COMSTAR Process Control Compiler (in the form of key-per-function numbers and symbols).

The messages are then translated into machine language. An application-oriented language, the process engineer is able to have hands-on experience with PCL because it is conversational, relates directly to relay charts, ladder diagrams and has Boolean algebra logic functions. It also has bit memory and BCD character memory buffer storage. COMSTAR's PCL can simulate a J-K Flip Flop.

PROCESS CONTROL COMPILER.

The Process Control Compiler is a small portable unit designed for programming the COMSTAR 4 microcomputer. The programming can be accomplished with high reliability even in the field.

PCL instructions are loaded into the PROM (Programmable Read Only Memory) through the Compiler. The input functions are directly displayed on a 32 character alpha-numeric plasma display, insuring the user of a correct input. All keyed-in commands will be stored in a buffer and can be verified with a key command. You can enter up to 256 bytes of data (instructions). The data is compiled and can be dumped into an erased PROM chip.

There is an optional EIA or TTY output so the entered program can be printed out for future reference. The Compiler can also edit, erase or program PROM's in machine language.

*The PCL Compiler will handle the following capacities:

Contact Closure Inputs	128 Contacts
Logic/Power Inputs	128 Lines
Logic/Power Outputs	128 Lines
BCD Data Input	144 Digits
BCD Data Output	32 Digits
Bit Memory	192 Bits
Data Memory	256 Char.

*Program Memory has up to 16 reusable memory chips of 256 x 8 bit words each.

*Data Memory has up to 32 RAM memory chips of 80 x 4 bit words each.

COMSTAR Process Control Compiler. The compiler is designed with all solid state logic, providing high field reliability.

KEY   PER-FUNCTION INSTRUCTIONS

I   Formatting Instructions

    1.   IF
    2.   AND
    3.   OR
    4.   THEN
    5.   END
    6.   EOC (End of Compile)

II   Internal Status Testing Instructions

    1.   Memory XX
    2.   Mem-Bit XX

III   Input Instructions

    1.   INL XX
    2.   IBCD XX NN

IV   Output Instructions

    1.   OUT XX
    2.   OFF-OUT XX
    3.   OBCD XX NN

V   DATA Instructions

    1.   ADD SS 00 DD
    2.   SUB SS 00 DD
    3.   Compare: EQ, GT, LT
    4.   MOVE XXX YYY
    5.   LOAD XXD
    6.   CLEAR XX
    7.   SET XX

VI   Branching Instructions

    1.   GO TO XXX
    2.   CALL XXX