

A CIMBUS M6800 Microprocessor card

To handle the large amount of extra vacuum equipment necessary in the main ring of the SPS for reduced pressure operation in connection with the proton-antiproton project, a comprehensive, autonomous local control system for each auxiliary building (BA1 - 6) was required.

To this end a microprocessor based controller has been developed.

It should be noted, however, that this controller has been designed in such a fashion that it is not system dependant and can therefore be used in many other applications. A CIMBUS interface has been included to allow maximum compatibility with the present SPS control system.

The main characteristics of this unit are as described below :

- Microprocessor - Motorola 6802 (M6800 incorporating clock and 128 bytes of RAM)
- Clock frequency - 4'194'304 Hz (2<sup>22</sup>)
- Input/Output ports (i) - A synchronous serial port with programmable band rate generator
- 20 mA current loop and TTL levels out.
- (ii) - Parallel interface adapter with 15 free programmable input/output ports.
- On card memory (i) - 128 bytes of RAM
- (ii) - Space for up to 8k bytes of EPROM (Intel 2716 or TMS 2532)
- Reset - Internal automatic reset on power-up and external reset possibilities.
- BUS connections - Fully buffered output onto CIMBUS.  
Full internal memory expansion is however possible.

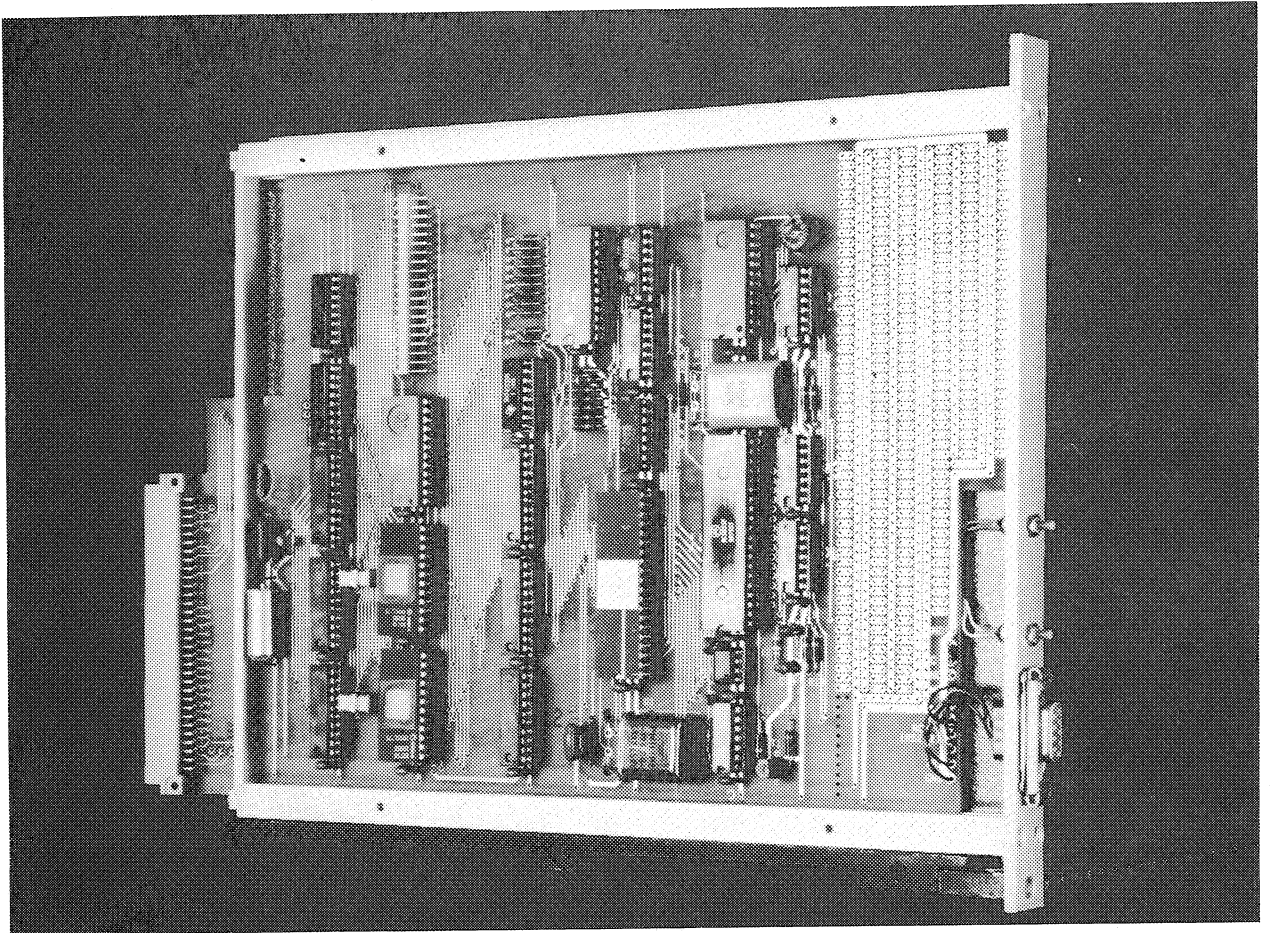
The unit has been designed in a 5 unit high, 1 unit wide, CIM module. Extra space has been left on the side of the card for prototyping work to tailor the microprocessor to a particular system.

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