the address bus. If it is used to latch the data bus as well then the data bus has non-data information on it at NADS time.

This information is a four bit 'page' number to denote which of the 16 possible 4K pages is required (in a basic 4K system this address will always be 0000 and thus need not be latched). The other four bits of the data bus at NADS time shows the status of four flags R-FLAG shows whether input or output is to take place, I-FLAG shows whether data or instruction is being accessed, D-FLAG shows that a DELAY in in operation and H-FLAG can be used with the CONT input to enable a programmed halt.

Vss-VGG Nominal 12 volt supply.

WE HAVE 'LIFT-OFF'

Perhaps your car is not quite capable of 'lift-off' but it may well have ignition problems, so why not solve the problems with SC/MP? Fig 2 shows a very complex and relatively expensive application for SC/MP which may find application in racing engines fitted to cars, boats, planes, etc. An analogue multiplexer samples various signals from transducers in significant parts of the engine and passes these to the CPU via an A/D converter. The selection of transducer input and output selection is done via a latch connected to the data bus. The system may well be expensive as a straightforward electronic ignition system but remember that with all that information available to it the CPU would also be able to give outputs of RPM, MPG, general engine efficiency, etc., and still have enough time and core to control lights, heating, warning lamps, etc. In fact a car built around a SC/MP might be a very interesting proposition.

At a recent exhibition NS had a Scalextric racing car set run from a microprocessor which was not a SC/MP but could well have been according to NS engineers. The idea was for one car controlled by a human to race against another car controlled by the MPU, similarly one can imagine a very complex train layout being controlled by a SC/MP system—in its spare time of course after looking after the rest of the household heating and cooking and helping junior with his homework. Anybody got a nice N guage layout they want to sell?

Price of the SC/MP CPU chip is only £12.50; an evaluation kit at £50 and a pseudo-TTY kit also at about £50. Available from NS distributors or Bywood starting July/August. ●

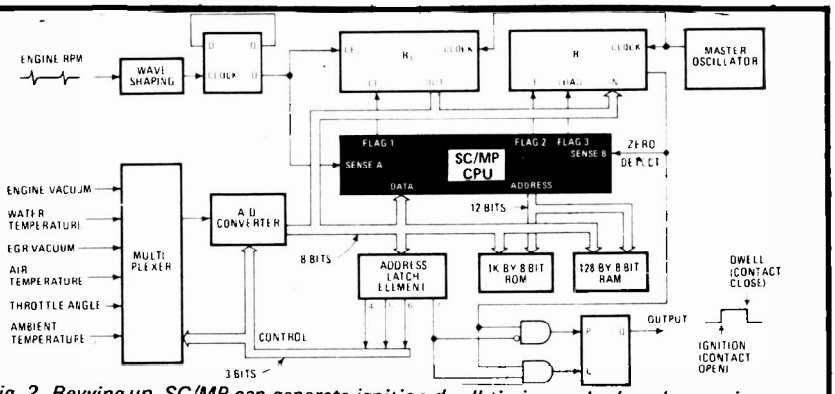

Fig. 2. Revving up. SC/MP can generate ignition dwell timing angles based on engine parameters as inputs. The external registers, R 1 and R2, allow the system to handle high engine speeds by sampling engine conditions every other cycle.