



on voltage and faster turn-on times compared to normal diodes.

HEI system change

As already noted, the PIT module is teamed up with the HEI system featured in the June 1998 issue of SILICON CHIP.

When using the HEI with the PIT module, the connection shown in Fig.1 means that the collector of Q2 on the HEI PC board connects to pin 1 (RA2, trigger input) on the PIT board and provides the PIC with timing information. The PIT output, pin 2 (RA3), is connected to pin 5 of IC1 on the HEI board.

In this configuration, the output from the MC3334P chip, pin 7, goes low for the same duration that its pin 5 goes low, thus the spark and dwell timing are both derived from the PIT module and not the HEI board. A 5V supply is taken from the PIT module to power the MC3334P chip, to make it compatible with the PIC.

In operation, the PIT module retards the advance by 45 crank degrees until the engine RPM matches the minimum RPM value set by the user. Then as the RPM rises above this point, the programmed amount of advance will be given. The timing is calculated this way so that one data set can have more or less advance than the other.

Microswitch S1, if used, is operated by the vacuum actuator. It operates when the required vacuum is reached in the intake manifold.

RPM limiting is achieved by missing every second spark when the maximum RPM value is reached. All other variables are ignored until the engine revolutions fall below this value.

Microprocessor functions

Instead of using look-up tables for engine data, the program pre-calculates a set of variables based on the data entered by the user and then stores these into the PIC's internal

Table 1: Resistor Colour Codes

No.	Value	4-Band Code (1%)	5-Band Code (1%)
6	10kΩ	brown black orange brown	brown black black red brown
1	2.2kΩ	red red red brown	red red black brown brown
8	1.5Ω	brown green red brown	brown green black brown brown
4	330Ω	orange orange brown brown	orange orange black black brown
3	100Ω	brown black brown brown	brown black black black brown
1	22Ω	red red black brown	red red black gold brown