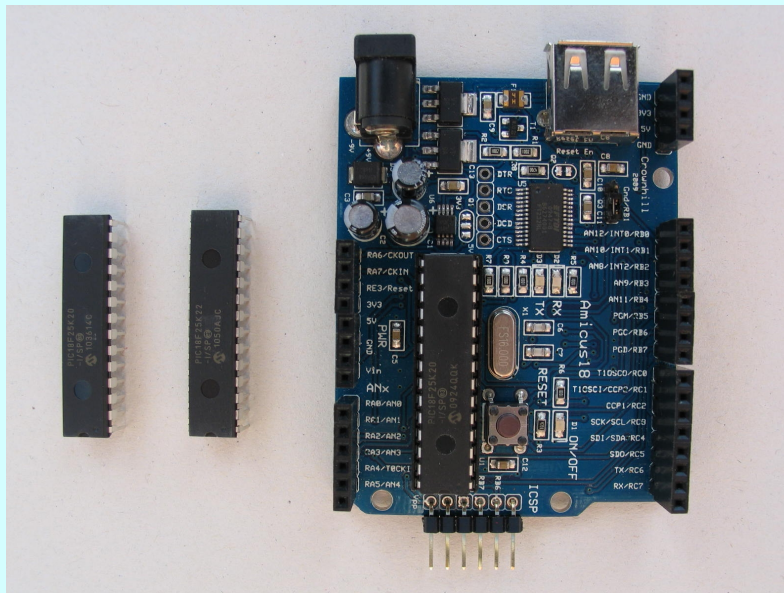
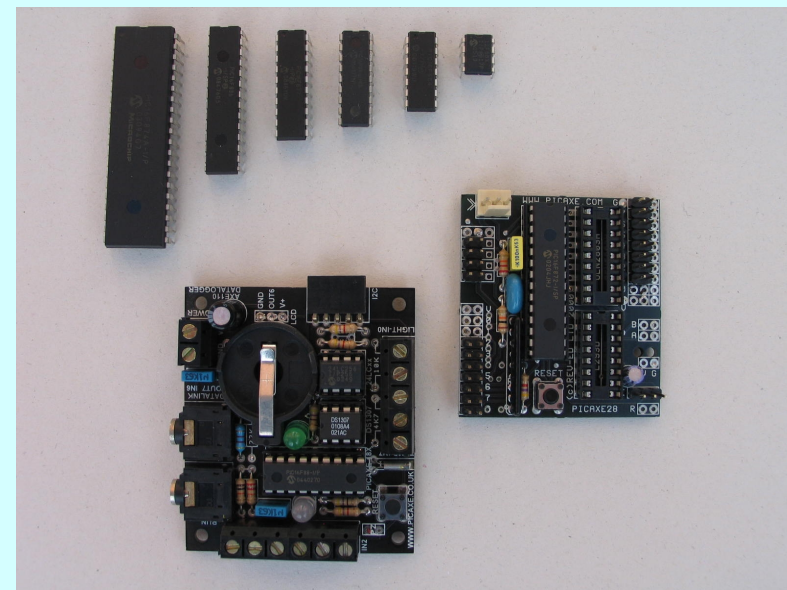


Amicus 18 - Moving on from Picaxe

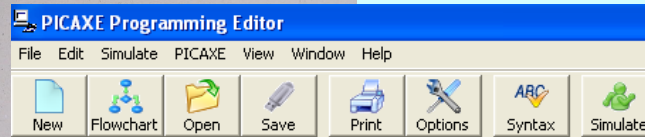
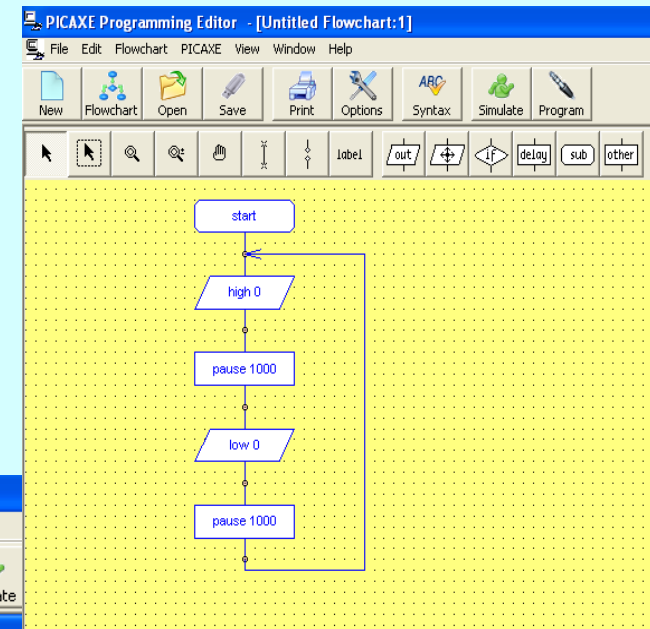
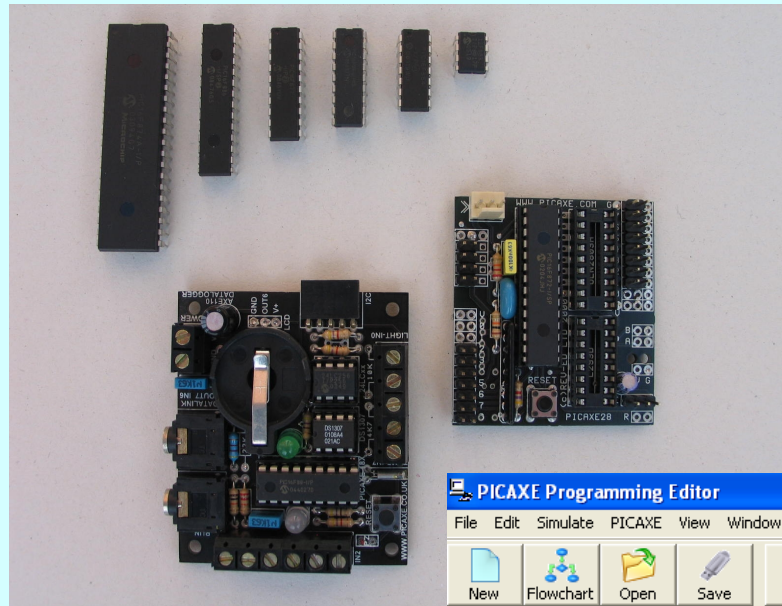


Amicus
myamicus.co.uk

Picaxe
picaxe.co.uk



Picaxe Overview

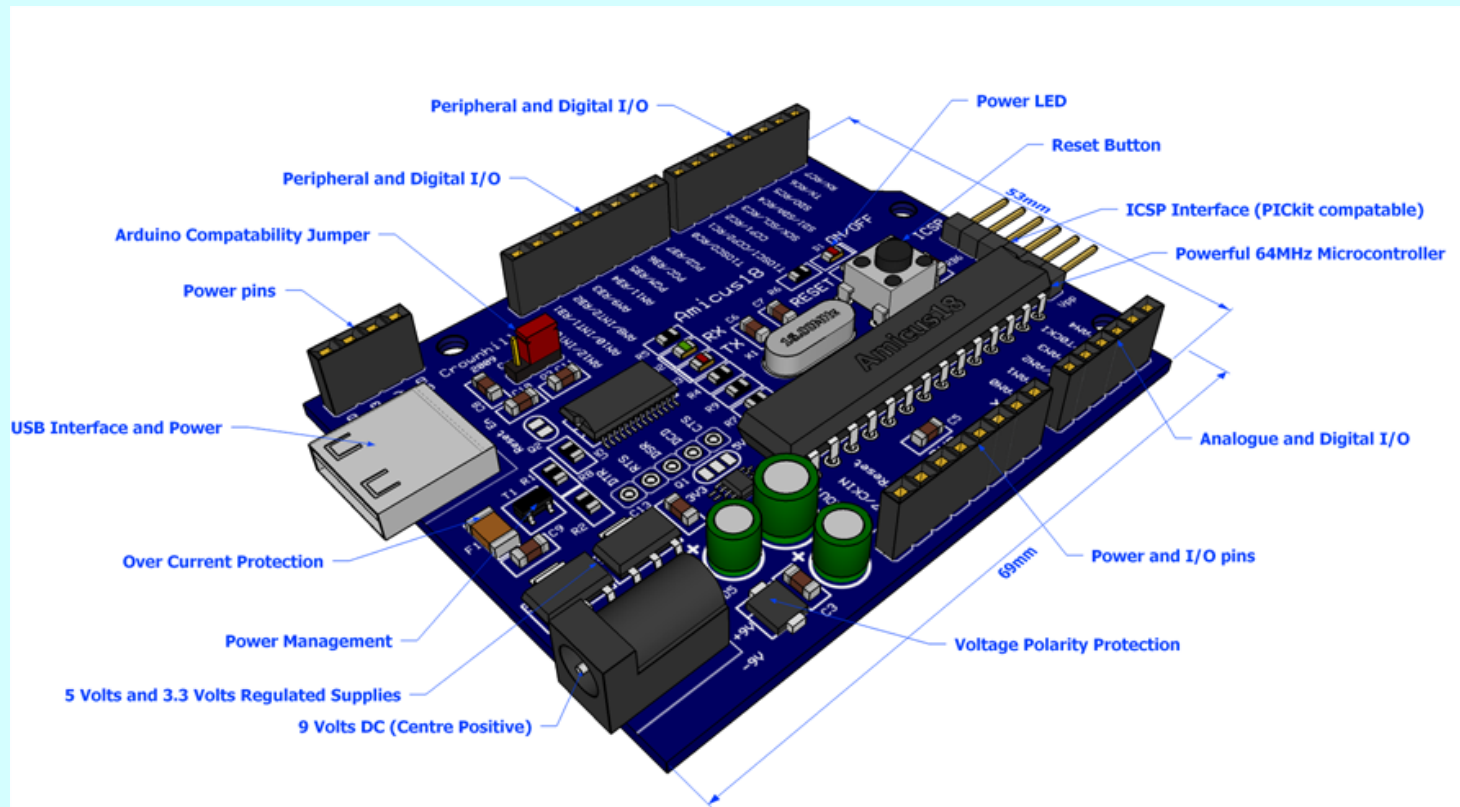


The image shows the PICAXE Programming Editor window with a BASIC program loaded. The title bar reads "C:\Documents and Settings\Compaq_Owner\My Documents\BG Files\Amicus\Sample picaxe prog...". The menu bar includes File, Edit, Simulate, PICAXE, View, Window, and Help. The toolbar contains icons for New, Flowchart, Open, Save, Print, Options, Syntax, and Simulate. The program text is as follows:

```
1
2 'Toggle an Output 100 times
3 'Picaxe 18M2
4
5 start:
6   for b0 = 1 to 100 'set counter to 100
7     high b.7        'switch on LED 1
8     pause 250       'for 250ms
9     low b.7         'switch off LED 1
10    pause 250       'for 250 ms
11  next
12
13 end
```

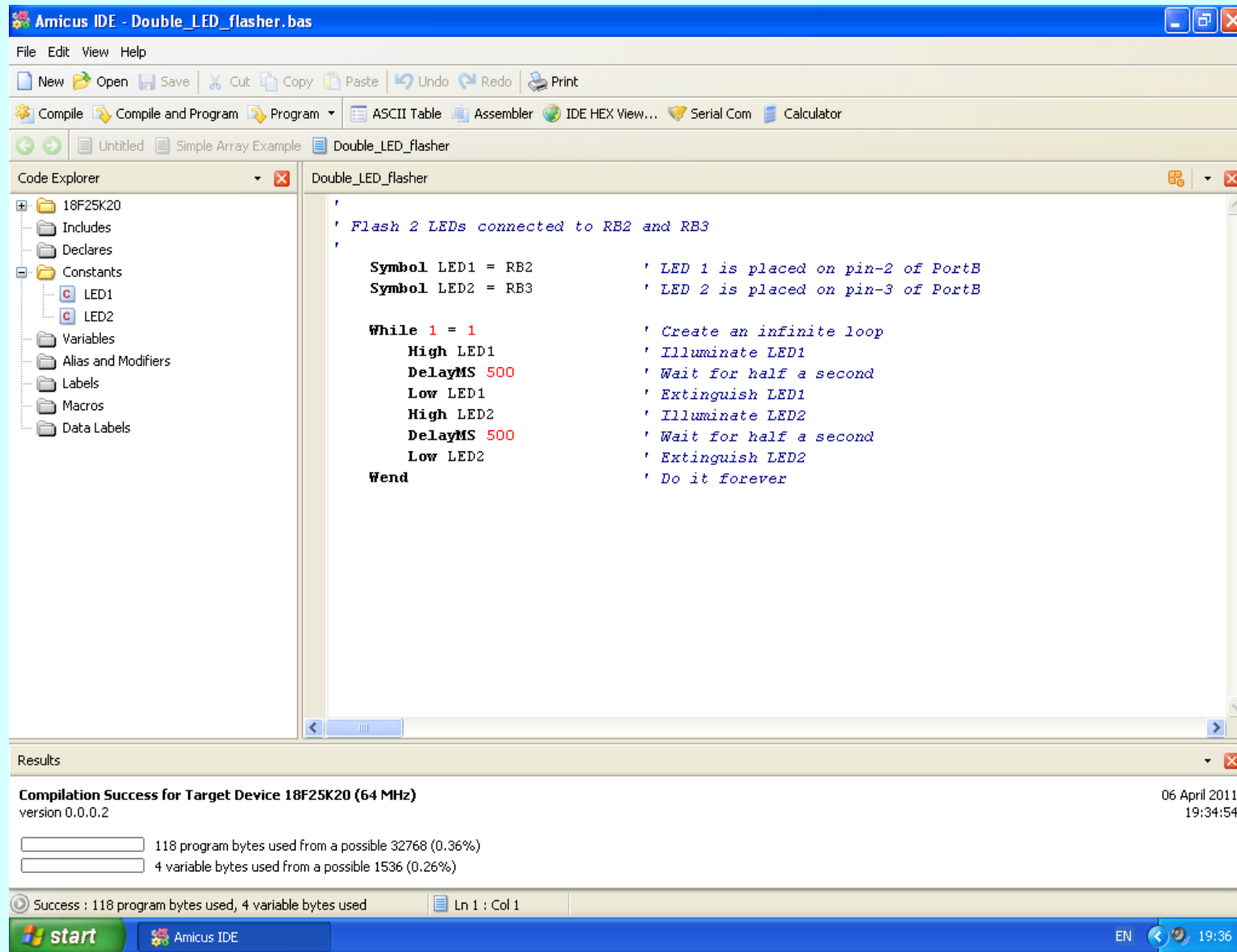
On the right side of the window, there is a sidebar with the following sections: Variables, Constants, and Labels.

Amicus Overview



Currently restricted to two PICs:
The PIC18F25K20 (3V) and the PIC18F25K22 (5V)
These are 32K flash devices operating at 64MHz.

Amicus integrated development environment (IDE)



Comparing Basic Commands

Picaxe

Toggle an Output 100 times
Picaxe 28X2

```
for b0 = 1 to 100 'set counter to 100
  high b.7          'switch on LED
  pause 250         'for 250ms
  low b.7           'switch off LED
  pause 250         'for 250 ms
next               'loop 100 times
```

Amicus

Toggle an Output 100 times
Amicus

Dim ByteVar As Byte

```
For ByteVar = 1 To 100
  High RB3
  DelayMS 250
  Low RB3
  DelayMS 250
Next
```

Comparing Speed

Picaxe

- Interpreter-based system
- Tokens used to store program
- Timings imprecise and vary with the length of program
- At 64 MHz, toggling a pin high then low typically takes 30 microseconds

Amicus

- Compiled code
- Full integration with Microchip MPLab IDE
- Time-sensitive operations are accurate and reliable
- At 64 MHz, toggling a pin high then low typically takes 1 microsecond

Startup Costs

Picaxe

Project board	£12
Download cable	£12
Picaxe 28X2	£ 6

Total £28

Amicus

Project board	£26
Download cable	£ 2
PIC 18F25K22	£ 2

Total £30

Support

Picaxe

- Excellent manuals
- Exemplar projects
- Interfacing details
- Online forum with near instant response to questions

Amicus

- Excellent manuals
- Adequate website
- Sample code supplied
- Online forum with replies to questions usually within 24 hours

Conclusions

- Amicus is as easy to use as Picaxe
- Amicus is a cheap as Picaxe
- Amicus is restricted to only 2 PICs
- Amicus runs significantly faster than the equivalent Picaxe
- Amicus includes commands which look useful for maze solving
- If you like to program in basic, Amicus is worthy of serious consideration