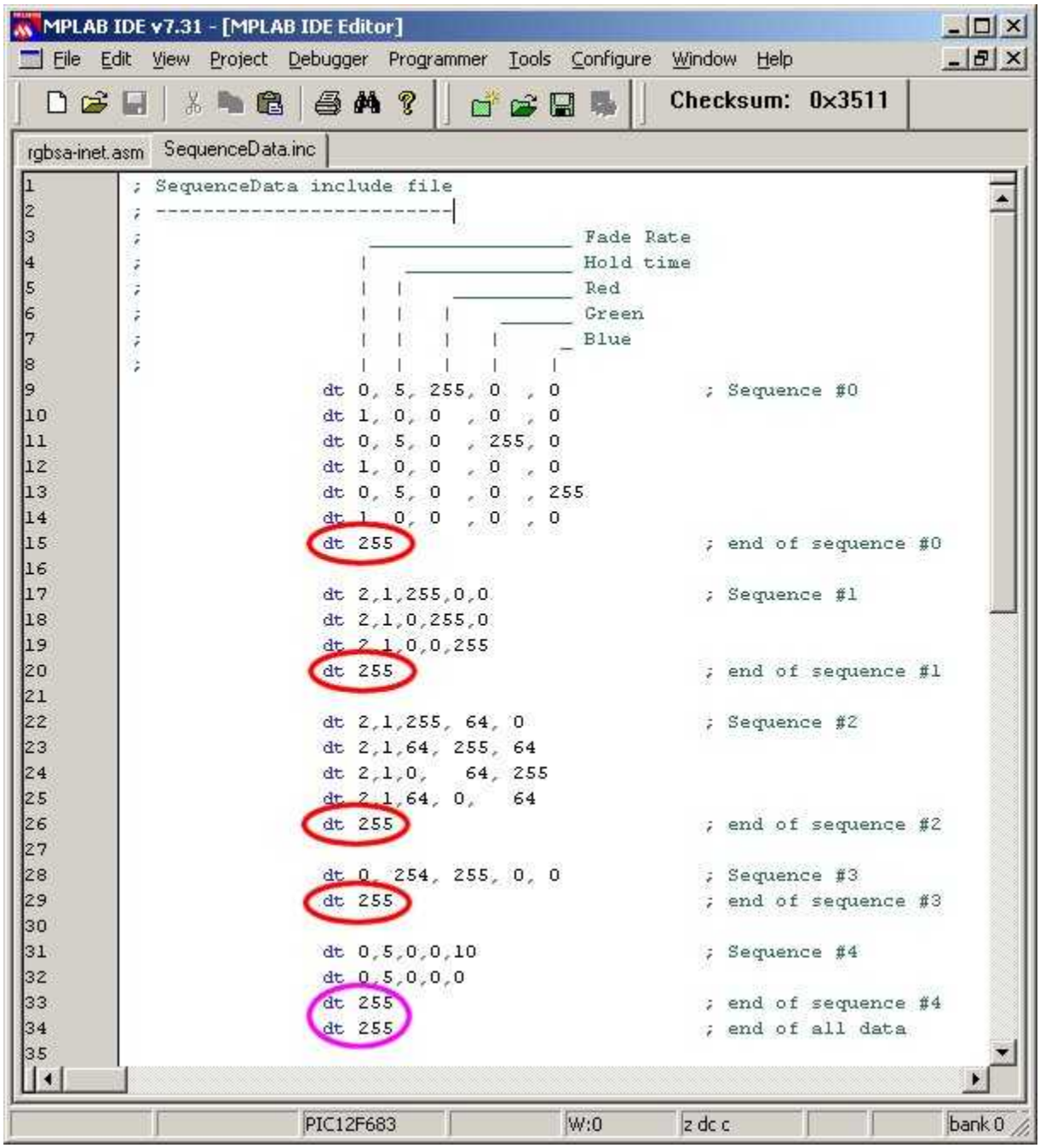
Format of the Sequence Data

The data used by the application for the RGB sequences is held in the file '*sequenceData.inc*' You can edit this file to add, remove or change the data provided. You must ensure that it follows the format described. In particular pay attention to the 'end of sequence' and 'end of all data' markers and also ensure that each line of sequence data contains five comma separated entries. (see screen dump below)



In the screen dump above note the 'end_of_sequence' markers circled in **red** and the 'end_of_all_data' marker circled in **purple**.

You must have at least one sequence present up to a maximum of 256 individual sequences, although you're likely to run out of available memory on the PIC before you reach this limit.

a. Each line of data starts with a 'dt' (data table) assembler directive.

b. All data is specified using decimal values.

c. Each data value must be separated by a comma

d. The sequence data on each line has five fields:

   1. Fade Rate: speed the colours fade from the current values to the new values. Each step occurs at an interval of 5ms x Fade Rate.
      - Fade Rate value of 0 indicates the RGB values will be updated immediately without fading.
      - Fade Rate value must not be set to 255 except to indicate end of sequence. (see e. below)

   2. Hold Time: after fade completes, delay before moving to next line of data. Interval is 50mS x Hold Time
      - Hold Time value of 255 following a Fade Rate of 255 indicates end_of_all_sequence data.

   3. Red PWM value. 0 = 0% (LED off) through to 255 = 100% (LED fully on)
   4. Green PWM value. 0 = 0% (LED off) through to 255 = 100% (LED fully on)
   5. Blue PWM value. 0 = 0% (LED off) through to 255 = 100% (LED fully on)
      - Typically changes in LED brightness are more noticeable between 0 and 128 than from 128 to 255.

e. End of the current sequence data is indicated by the Fade Rate field being set to '255'. When the application encounters this it restarts the sequence from the beginning.

f. At the end of all available sequence data both the Fade Rate and Hold Time fields must be set to '255'

After editing *sequenceData.inc* the file should be saved and the *rgb101g3_main.asm* reassembled. The resulting *rgb101g3_main.hex* file can them be programmed into the PIC

SOURCE:

http://picprojects.org.uk/projects/rgb/index.htm