

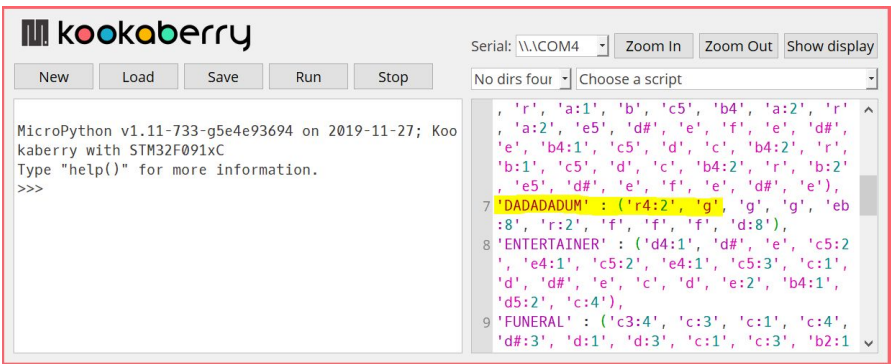




# Music Demo App (KAP033)

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|--|---|---|---|
| <p>Digital Speaker Module</p> <p>Plugged into P2</p> | <p><a href="#">FIT0449</a></p>  |  |  |
| <p>KookaIDE</p>                                      |  |   |   |

## Context

Illustrating how the Kookaberry can play tunes from an indexed list and demonstrating the musical notation used on the Micro:Bit to write tunes.

## Directions

1. Plug the speaker module into P4
2. Select from list of 21 tunes by scrolling up (Button D) or down (Button C). When selected, play by pressing Button B
3. To stop playing whilst in the middle of a tune, press reset (small button on rear of board).
4. If reset is pushed the Kookaberry needs to be restarted and the Music Demo app selected again.

## Micro:Bit musical notation

Each note has a name (like C# or F), an octave (telling MicroPython how high or low the note should be played) and duration (how long it lasts through time). Octaves are indicated by a number ~ 0 is the lowest octave, 4 contains middle C and 8 is about as high as you'll ever need unless you're making music for dogs. Durations are also expressed as numbers. The higher the value of the duration the longer it will last. Such values are related to each other - for instance, a duration of 4 will last twice as long as a duration 2 (and so on). If you use the note name R then MicroPython will play a rest (i.e. silence) for the specified duration.



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## Viewing notation

1. Connect the Kookaberry to a PC and open KookaIDE.
2. Load and run the `musictunes.py` programme from the `lib` folder of the Kookaberry.
3. The first two instructions of the opening notes to Beethoven's Fifth Symphony (DADADADUM) are:
  - 'r4:2' which is rest in Octave 4 for 2 "ticks" duration
  - 'g' is the note G in octave 4 (392 Hz) played for a 2 tick duration. The octave and duration states are carried over from the preceding instruction.

## Open Question

What are the main differences between the micro:bit and RTTL musical notations? Check out the latter in the [RTTLMusicDemo App](#) description