

# Plays a music at the end of a print

## Requirements:

It is possible to play some music (8bits) at the end of your prints in the following cases:

- If you have a LCD display with a Buzzer
- If your electronic board supports an audio output
- If your firmware supports **M300** commands (Marlin, Repetier)

## How does it work?

It is possible to generate a certain amount of Audio sounds by modulating the output signal of the Display Buzzer.

**M300** Gcode command allows to do just that.

You can have the full command details by looking at the dedicated page ::

[http://reprap.org/wiki/G-code#M300:\\_Play\\_beep\\_sound](http://reprap.org/wiki/G-code#M300:_Play_beep_sound)

## Can I find existing sounds/musics?

There are some tools that already exist. They allow you to convert any RTTTL format ringtones into M300 compatible Gcodes.

You can find one here:  
: <http://ddrboxman.github.io/RepRapRingtone/> , it's an online generator that can convert Ringtones into M300 compatible Gcodes.

This generator also allows to render the audio output of each conversion.

However, if you want a pack of already converted songs with more than 11000 ringtones check this link:

[https://bitbucket.org/Nutz95/rtttl2gcode/raw/fd32c01fc9fa2f61b985f3c061954f183a9f3162/RingTones/Converted\\_RTTL\\_RingTones.zip](https://bitbucket.org/Nutz95/rtttl2gcode/raw/fd32c01fc9fa2f61b985f3c061954f183a9f3162/RingTones/Converted_RTTL_RingTones.zip)

You will also find a batch convertor here::  
<https://bitbucket.org/Nutz95/rtttl2gcode/src>

With the originals ringtones here: <https://bitbucket.org/Nutz95/rtttl2gcode>

## How to proceed?

Each converted file has **Gcode** extension.

Each **.Gcode** file is a simple text file that you can open and edit with a standard text editor such as [notepad++](#), notepad or any other.

Here is an example of what is inside one of these converted files:







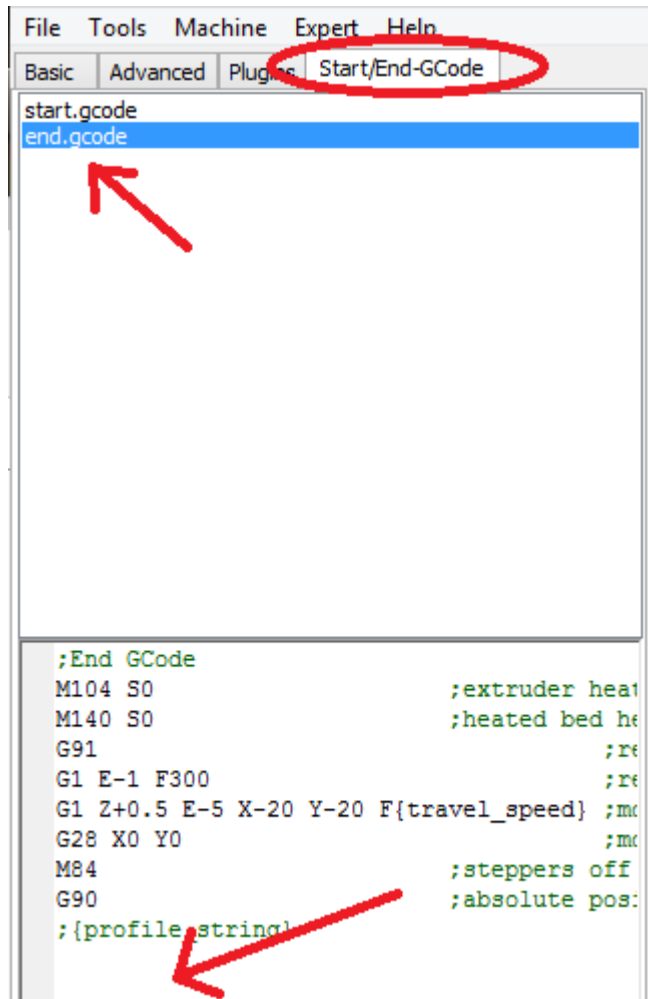
```
Final Fantasy Victory.gcode x
1 ;FinalFan
2 M300 S987 P150
3 M300 S0 P75
4 M300 S880 P150
5 M300 S0 P75
6 M300 S987 P150
7 M300 S0 P75
8 M300 S880 P75
9 M300 S2349 P150
10 M300 S0 P75
11 M300 S2349 P75
12 M300 S2217 P150
13 M300 S0 P75
14 M300 S2349 P75
15 M300 S2217 P300
16 M300 S987 P150
17 M300 S0 P75
18 M300 S880 P150
19 M300 S0 P75
20 M300 S1661 P150
21 M300 S0 P75
22 M300 S880 P75
23 M300 S1479 P300
24 M300 S0 P600
25 M300 S987 P150
26 M300 S0 P75
27 M300 S880 P150
28 M300 S0 P75
29 M300 S987 P150
30 M300 S0 P75
31 M300 S880 P75
32 M300 S2349 P150
33 M300 S0 P75
34 M300 S2349 P75
35 M300 S2217 P150
36 M300 S0 P75
37 M300 S2349 P75
38 M300 S2217 P300
39 M300 S987 P150
40 M300 S0 P75
41 M300 S880 P150
42 M300 S0 P75
43 M300 S987 P150
44 M300 S0 P75
45 M300 S2349 P75
46 M300 S2637 P300
47 M300 S0 P300
48
```

## Open your slicer:

Each slicer should allow you to customize at least the start and the end of your gcode.

The part that we are looking for is to customize the **end** of our gcode, so that the music will play once the print is over.

The following example is done using [Cura](#).



In the Tab section of cura you will see « **Start/End-GCode**» .

inside you should be able to choose « **end.gcode** » from a list

Then a text zone will appear at the bottom with some text in color.

This text are the actual instructions used by your 3D printer when the print is finished.

Now you only need to copy/paste the content of your M300 converted ringtone file into the end of the text editor.









```
Basic | Advanced | Plugins | Start/End-GCode
start.gcode
end.gcode

;End GCode
M104 S0 ;extruder h
M140 S0 ;heated bed
G91
G1 E-1 F300
G1 Z+0.5 E-5 X-20 Y-20 F{travel_speed}
G28 X0 Y0
M84 ;steppers o
G90 ;absolute p
;{profile_string}
;FinalFan
M300 S987 P150
M300 S0 P75
M300 S880 P150
M300 S0 P75
M300 S987 P150
M300 S0 P75
M300 S880 P75
M300 S2349 P150
M300 S0 P75
M300 S2349 P75
M300 S2217 P150
M300 S0 P75
M300 S2349 P75
M300 S2217 P300
M300 S987 P150
M300 S0 P75
```

**This is it!**

now you can slice normaly any 3D object you want, your music will be played at the end of each new prints.

# How to easily test your converted files?

Depending on your firmware version, the audio output of the songs might be crapy (For example, marlin version

before 1.1.0.RC3 better handle the audio output)

So it's very interesting to test those songs before using them everywhere.

You can copy/paste the already converted files (with .gocde extention) into a SD card and play them directly from your LCD display.

## **Warning**

Due to some memory restriction, firmwares are often limited to display a maximum amount of files per folder.

Adding directly the 11 000 files inside a single folder will most likely crash your firmware when it will try to list all the files.

So it's advised to only test a pack of 20 or 30 files max per folder.