

# Arc Movement

**Feature Name:** Arc Movement

**Feature Name in Annotation:** ARC\_SUPPORT

## Source of Information

Domain knowledge, Code comment, Source Code, ifdefs

## Strategy Used:

Through G-code documentation, we learned that the printers would sometime make arc movement by using G-code G2 and G3. Then we started from the largest and most central logic file MarlinMain.cpp, and browsing through the code comment and source code for whether the comments, variables, method, ifdef macros names contain keywords such as “arc”. Lastly, the other source code files are also browsed to retrieve other related part of the feature.

**Feature Description:** This feature is mandatory for Marlin. An arc movement pivots around a given central point instead of only giving the distance to the destination when making a normal movement. There are several alternative methods implemented for arc movements.

**Time spent:** This feature is one of 18 features that were located by manually going through all code files of Marlin using our source code method. It took one person 25 hours to identify all 18 features.

## Feature Characteristics:

Feature Name	LoFC	SD	TD	Completely Wrapped by ifdef
Arc_Movement	262	5	5	yes

## Ratios of sources (%)

RL	PR	Commit	Ifdef	Domain	CC	SC	GD
0	0	0	5	45	25	25	0

**RL:** Release Log; **PR:** Pull Request; **CM:** Commit, **Ifdef:** Ifdef Expression; **DK:** Domain Knowledge; **CC:** Code Comment; **SC:** Source Code; **GD:** G-Code Documentation.