

# Arc3Pt Plugin for CamBam

[Version 1.1]

## Purpose

While the CAD capabilities provided in CamBam are necessarily limited (it is not intended to be a fully-fledged CAD system), many users will use these capabilities in their day-to-day use. This plugin focusses on drawing Arcs and Circles using three defined points (and not the centre).

Arcs are defined from three points: a start point, a point along the Arc and the end point of the Arc. Circles are defined from three points on the circumference of the Circle. Given that the centre point is computed it does not need to be accessible on the screen. This allows Arcs and Circles that have a large radius to be easily defined.

The construction of a Circle is distinguished from the Arc with the use of the <Shift> key to complete the definition task.

## Installation

The Arc3Pt.dll file must be placed inside the CamBam plugins folder, and CamBam restarted. The Arc3Pt option  will then appear in:

1. Top toolbar,
2. Draw menu,
3. Context menu.

## Operation

To use the plugin:

- Select the Arc3Pt option (from the Toolbar, the Draw menu, or the Context menu).
- You will be then prompted to select the three points:
- To draw an Arc:
  - <Left Click> to enter the start point of the Arc,
  - <Left Click> to enter a point along the Arc,
  - <Left Click> to enter the end point of the Arc,
  - <Enter> or <Left Click> to end the operation.
- To draw a Circle:
  - <Left Click> to enter the first point on the circumference,
  - <Left Click> to enter a second point on the circumference,
  - <Left Click> to enter the third point on the circumference.
  - <Shift><Left Click> to end the operation.
- The new Arc or Circle will be found in the currently active Layer. It is placed on the Z=0 plane.

If the 3 chosen points are co-linear, or if the points are not all unique, or less than 3 points are defined then an error message will be provided.

## Acknowledgement

Some of the code used has been derived from the Dimensioned Objects plugin as provided by EddyCurrent.

## Arc3Pt Plugin Versions

<b>Version</b>	<b>Date</b>	<b>Notes</b>
1.0.	23/8/2023	First version for feedback and comments.
1.1	28/8/2023	Added capability to create three-point circles.