

SeeMeCNC Guides

Carbon Fiber Arm Installation for DUET Printers

This guide will show you how to install the carbon fiber arms and modify your DUET3D printer config.g file and re-run the first probe.

Written By: SeeMeCNC

Step 1 — Remove Springs



- Remove the white plastic springs. Stretching one side at a time to release the ball on the spring. Set aside.

Step 2 — Remove Arms



- Pull each ball joint, unsnapping the arm from the ball studs.
- Save arms just in case you need to return to a stock configuration.

Step 3 — Install Carbon Fiber Arms



- Snap all six new carbon fiber arms.
- Install the six white plastic ball springs.

Step 4 — Duet - Delete Old Files

File Name	Size
bed.g	285 B
cancel.g	45 B
config-override.g	523 B
config.g	2.7 KIB
config.g.bak	2.7 KIB
DuetWiFiServer.bin	289.9 KIB
heightmap.csv	855 B
homedelta.g	380 B
iap.bin	59.5 KIB
iap4e.bin	60.0 KIB

- Connect to the printer and navigate to Settings>System Editor
- Delete the following files:
 - config-override.g
 - heightmap.csv

Step 5 — Update the config.g

The screenshot shows the Duet printer control interface. On the left, the Settings menu is open, and the System Editor is selected. The System Directory shows a list of files, with config.g highlighted. The System Editor shows the contents of config.g, with line M665 highlighted. Red arrows point to the Settings menu, the config.g file, and the M665 line in the System Editor.

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M550 PArtemis          ; Printer name
M555 P2                ; Repetier Output
M552 S1               ; Enable Wifi
M575 P1 B57600 S1     ; PanelDue Com Setup
G21                  ; Work in millimetres
G90                  ; Send absolute coordinates

M569 P0 S0           ; Drive 0 goes forwards (X)
M569 P1 S0           ; Drive 1 goes forwards (Y)
M569 P2 S0           ; Drive 2 goes forwards (Z)
M569 P3 S1           ; Drive 3 goes forwards (E0)
M569 P4 S1           ; Drive 4 goes forwards (E1)

M574 X2 Y2 Z2 Z2 S1 ; set endstop configuration (all endstops at high end, active high)

M665 R150 L340.5 B155 M530 X0 Y0 Z0 ; delta radius, diagonal rod length, printable radius and homed height
; Y X Z are tower angle offsets
; endstop offsets in mm

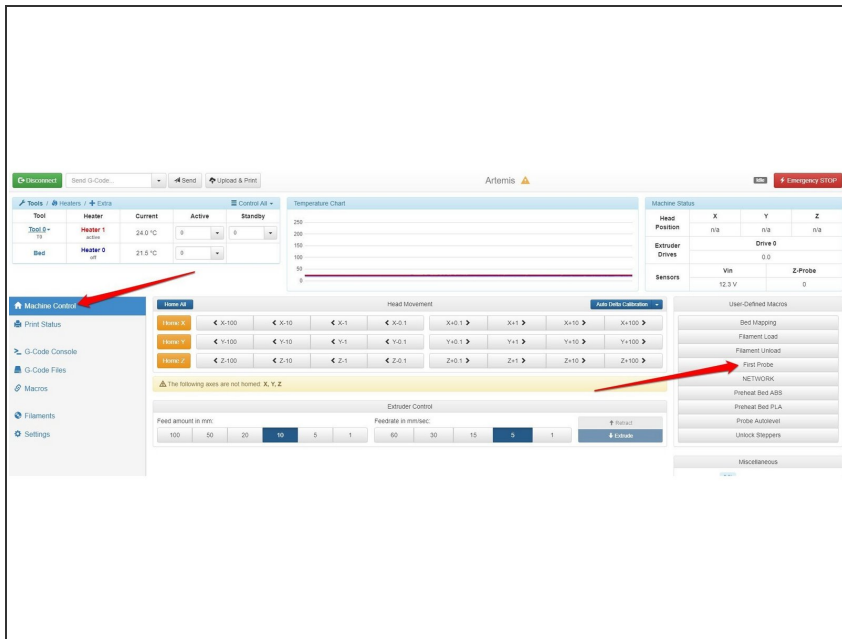
M350 X16 Y16 Z16 E16:16 I1 ; Set 16x microstepping w/ Interpolation

M92 X200 Y200 Z200   ; Set axis steps/mm
M92 E182.0:182.0     ; Set extruder steps/mm

M906 X1200 Y1200 Z1200 E1200:1200 I50 ; Set motor currents (mA) and idle current %
M201 X5000 Y5000 Z5000 E5000         ; Accelerations (mm/s^2)
M203 X18000 Y18000 Z18000 E18000     ; Maximum speeds (mm/min)
M566 X2000 Y2000 Z2000 E2000         ; Maximum instant speed changes mm/minute
  
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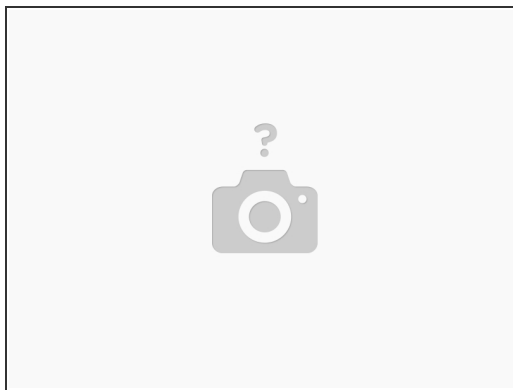
- Settings>System Editor
- Edit config.g - locate line M665, usually about 10 or 12 lines down.
 - Artemis 300 set L to 340.5 (L340.5)
 - RostockMAX v3.2 AND v4 machines set L to 340.5 and H to 350.
 - ⚠ If you do not change the H value, the machine will crash into the glass before being able to probe. The carbon fiber arms are longer than stock arms, shortening the max Z length.
- ⓘ The arm length value is a starting point. Although the arms are made in a precision jig, there may be variances and this value may need to be slightly adjusted if you are looking to print parts with specific size values. Adjusting and re-calibrating may be needed to tweak the final print size output.

Step 6 — Duet First Probe



- Save and reset, reboot, or power cycle the printer
- Prepare for probing by clearing the nozzle and print bed as usual
- Click the macro 'First Probe'
- Wait for completion.

Step 7 — Complete & Calibrated



⚠ Remember DO NOT use the button labeled "Auto Delta Calibration" Instead we use the macros we wrote.

⚠ Remember NEVER use software auto leveling in any slicing software. Auto leveling and calibration is performed by the firmware on ALL SeeMeCNC 3D printers.

- Remember when cleaning glass or changing a nozzle to use "Probe Autolevel" calibration macro.
- The "Probe Autolevel" macro calibrate your printer using SeeMeCNC developed g-code.