

M43 Pin report and debug

Feature Name: M43 Pin report and debug

Feature Name in Annotation: PINS_DEBUGGING

Source of Information

Releaselog, pull requests, commits, ifdefs with feature annotation name

Strategy Used:

Feature is identified from the latest release log first. The release log also provides the pull request and commits linked to the feature (see the links and tables below), ifdefs are also used for speeding up feature location.

Feature Release Version: 1.1.0 – RC8

Time took to Identify and Locate the feature: 0.5 hour

Time took to Understand the Implementation: 1 hour

Feature Description:

This feature implements the G-code M43 to report and debug pins plugged into the printer. It basically reports which pin is plugged in, and which is not. This can be used to debug in case any pin is not working or missing. It also reports the status of the pin, i.e. whether it is protected or not and pin mode.

Feature Information and Statistics:

| PR No. | Merged Time | PR | Commits | Files | Line Added | Line deleted |
|--------|-------------|--|---------|-------|------------|--------------|
| #4955 | 7 Oct 2016 | PINS_DEBUGGING and M43: Read pin states | 2 | 3 | 540 | 4 |
| #4974 | 10 Oct 2016 | Fix and follow up PR#4955 | 2 | 51 | 731 | 476 |
| #5188 | 31 Oct 2016 | Enhancements to M43 pins debugging | 9 | 4 | 859 | 236 |
| #5132 | 1 Nov 2016 | Followup to #5188- pins debugging clean up | 1 | 1 | 34 | 36 |

Ratios of sources (%)

| RL | PR | CM | Ifdef | DK | CC | SC | GD |
|----|----|----|-------|----|----|----|----|
| 50 | 20 | 10 | 20 | 0 | 0 | 0 | 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.

Pull Request Links:

<https://github.com/MarlinFirmware/Marlin/pull/4955>

<https://github.com/MarlinFirmware/Marlin/pull/4974>

<https://github.com/MarlinFirmware/Marlin/pull/5118>

<https://github.com/MarlinFirmware/Marlin/pull/5132>

Feature Characteristics:

| Feature Name | LoFC | NoFL | TD | Completely Wrapped by ifdef |
|--------------------------|------|------|----|-----------------------------|
| M43 Pin report and debug | 217 | 8 | 2 | No |

Feature's relevant historical data

Feature was requested from a printer builder to have this functionality to debug pins.