What does an HMS error mean on a Bambu Lab printer?

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Abstract. An HMS error is a Health Management System alert. Its 16-character code names the module that raised it and the severity, and its wiki page gives the fix.

Keywords: error-codes, firmware

Table 1. The number

Group	Characters	Field	In 0300-0100-0001-0001
1	First two	Module ID: the module that raised the alert	03: MC, the motion controller
1	Last two	Module No.: which unit, usually 00	00
2	First two	Part ID: the part inside that module	01
2	Last two	Part No.: which of those parts	00
3	All four	Alert level: 0001 error, 0002 warning, 0003 notification	0001: error, so the print stops
4	All four	Error code ID: the specific alert	0001

1 What does an HMS error mean on a Bambu Lab printer?

An HMS error is an alert from Bambu Lab's Health Management System, which watches the printer and its AMS (Automated Material System) for hardware faults, mechanical problems and failed prints. Each alert has a 16-character code in four groups: the first names the module that raised it, the third its severity. The code's wiki page gives the fix.

1.1 The number

The example is the wiki's own entry HMS_0300-0100-0001-0001, "The heatbed temperature is abnormal; the heater may have a short circuit."

The field layout and the alert levels come from the HMS Introduction page on the Bambu Lab Wiki, and the example from the wiki's HMS_0300-0100-0001-0001 entry.

1.2 Why does my Bambu Lab printer show HMS errors?

HMS is a set of status detectors spread across the printer that report to one central management unit. Bambu Lab's examples are a slow hotend fan, belt tension, a failed first layer scan and spaghetti (a print knocked loose into tangled strands). Whichever module detects the fault puts its own ID at the front of the code.

HMS has limits. Bambu Lab says it misses some faults, such as lost steps. For others it only knows that something failed: a clog may come from print settings or handling, and the code doesn't name the cause.

The module in the code isn't always the part that broke. The wiki's alert for a slow or stopped hotend cooling fan is HMS_0300-0300-0001-0001, a motion controller code. Its listed causes include a broken TH (tool head) board.

1.3 How do I read Bambu HMS error codes?

Start with the first two characters. These are the module IDs Bambu Lab publishes:

Table 2. How do I read Bambu HMS error codes?

Code starts with	Module (Bambu Lab's name)
03	MC, motion controller
05	AP, main board
07	AMS, Automated Material System
08	TH, tool head
0C	XCAM, Bambu Micro Lidar
10	Bambu Studio
11	Bambu Handy app
12	AMS Lite
18	AMS HT, Automated Material System Heater

The next two characters count units. With several AMS units, 0700 is AMS A and 0701 is AMS B. The wiki lists 0700 to 0703 as the same fault on different units. The second group often names the part: 0700-2000-0002-0001 is AMS A slot 1 out of filament, and 0700-2100-0002-0001 is slot 2.

The third group gives the severity. A 0001 error pops up red, stops the print and must be cleared before a new job. Bambu Lab rates its safety risk high, with an overheating hotend as its example. A 0002 warning shows yellow or orange and pauses the print until you clear it. A 0003 notification, such as an open door, shows blue and doesn't affect the print.

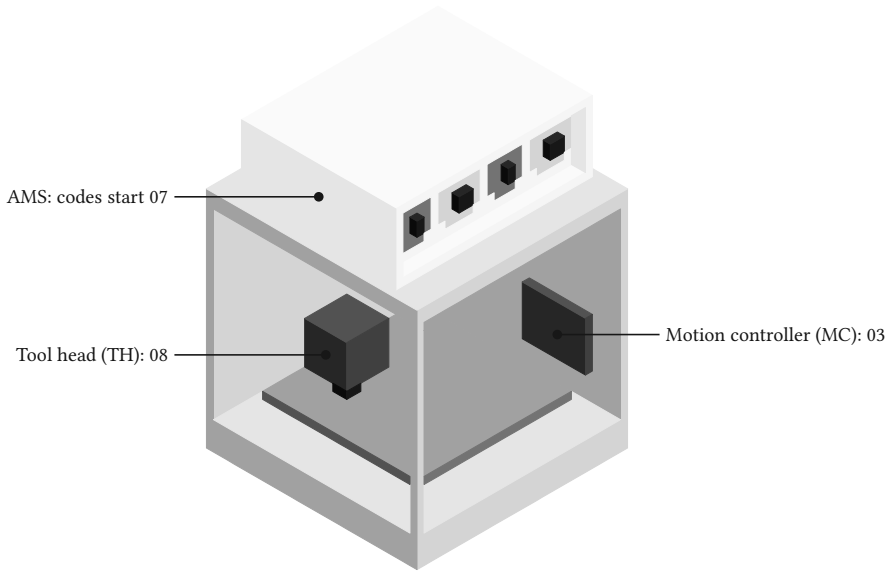


Figure 1. Each module raises its own HMS codes, and the first two characters of a code, such as 07 for the AMS, name the module that raised it.

1.4 Where do I see a Bambu HMS error and its fix?

- **X1 series:** messages sit in the Assistant on the touchscreen. Open one to see a QR code, and scan it with Bambu Handy or any QR app to open that code's wiki page.
- **P1 series:** codes scroll across the home screen. Write the code down and search the HMS Home Page, or read it in Bambu Handy or Bambu Studio.
- **A1 and A1 mini:** the Assistant is at the bottom right of the screen; tap a message for its QR code.
- **Bambu Handy and Bambu Studio:** the same messages appear in the app and under Assistant (HMS) in Bambu Studio's Device tab. Click one to jump to its troubleshooting guide.

Choose your printer model first on the HMS Home Page. The index runs per model, and an entry such as HMS_0500-0300-0001-0002 splits its steps by printer.

1.5 Are Bambu error codes the same as HMS codes?

No. Bambu Lab's plain error codes are shorter: 8 characters in two groups. Examples are 0500-4014 ("Slicing for the print job failed") and 0300-4000 ("Printing stopped because homing Z axis failed"; see homing failed). The printer forces these onto its main screen as a pop-up, while HMS messages wait in the Assistant. They have their own list on the wiki's Error Code page.

1.6 How to check it on your own printer

- **Copy all 16 characters.** Codes 0700 and 0701 are different AMS units, and the slot sits in the second group.
- **Read the color before anything else.** Red means the print has stopped, and Bambu Lab rates red alerts a high safety risk. For a heater or temperature error, such as the heatbed short above, power off and find the cause before you start another job.
- **Try the simple step the wiki gives first.** For HMS_0700-7000-0002-0008 (AMS mapping table), that is Resume, Retry or a reboot before any troubleshooting.
- **Power off and unplug before you open anything.** Bambu Lab's fix pages start with that warning, because a tool head cable worked on live can short.
- **Open a ticket when the wiki runs out.** If the code has no wiki page, or its steps don't clear it, submit a support ticket from your Bambu Lab account with recent printer logs and photos, as the fix pages ask.

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