

MT(Pre)/MK Pulse Warming



Firmware Versions (minimum):

v1.85

For Premium, HPPre v4.11/v2.10 (PCB v3.4)

Description:

Cartridge temperature is measured in head, if temperature is lower than a set point a short pulse is applied to all (not printing) nozzles.

Requirements:

Each new inserted cartridge must be calibrated (automatically, 2-10minutes when not printing).

During calibration the system should not print (calibration requires 1 minute of no print between each measurement).

For HPPre head's the firmware and PCB version must be correct.

Setup:

MT(pre) Menu "Settings->Stitching->Head N":

MK Menu "Settings->Head setup->Head N":

Pulse Warming: On/Off (for HPPre, only available if connected HPPre supports pulse warming)

Pulse Warming Temperature (C): Set-point Temperature in Celsius.

Monitoring:

MT(Pre)MK print menu:

Brown box around ink icon indicates cartridge is calibrating

MT(Pre) menu "Settings->Stitching->Head N->Pen N" and menu "Print->Ink icon N"

MK menu "Settings->Head setup->Head N->Pen N" and menu "Print->Ink icon N"

Temperature:

- N/A (if pen is open)
- Calibrating... (if new pen is inserted and calibration is running)
- temperature in Celsius

Function:

When pulse warming is enabled and inserted cartridge is calibrated the system will enable pulse warming.

When cartridge is cold the head will pulse warm cartridge to the desired temperature. If temperature is higher than set-point, pulse warming is disabled until temperature is below set-point.

When a new cartridge is inserted (cartridge with different ID than previous) or when Ink reset button is pressed, temperature calibration is started. Pulse warming is disabled for cartridge during calibration.

Calibration will measure cartridge temperature after every minute of no printing until the temperature of two consecutive measurements is identical. When this happens it is assumed that the cartridge is at room temperature, and pulse warming is enabled.

During pulse warming the cartridge temperature is monitored every second. The system does a sanity check to make sure pulse warming is performing ok. If the sanity check fails, pulse warming is disabled and calibration is started.

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