

Thermal 2 Exposure Head

Firmware Version 1.06 Release Notes

Document Number
739-00300A-EN

18 May 2006

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Revision History

Revision	Date	Author	Comments
A	15 May 2006	Ken Dyck	Created for TH2 firmware V1.06

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1. HOST/EXPOSURE HEAD COMPATIBILITY

Thermal 2 head firmware is distributed as part of a controlled release package or patch. This firmware has been qualified against certain versions of MPE and MCE firmware for each output device. Head firmware should only be loaded as part of a controlled release package. If you are installing a replacement head:

- Refer to **TechPlanet > Output > All CTP Devices Home Page > Controlled releases** to determine whether or not your head is compatible with the device control software and firmware. If it is compatible, you can install the head without changing any firmware.
- If your head firmware is out-of-date, upgrade the head firmware to the version supported by the controlled release.
- If the device control software and firmware are out-of-date, determine if an upgrade path exists for a newer controlled release. If an upgrade path exists, upgrade the host to the correct controlled release. Otherwise, a head downgrade may be necessary.

2. GETTING STARTED

This document provides release information for thermal 2 firmware version 1.06, which is a significant upgrade from version 1.05x. If you are upgrading from a version older than 1.05x, read the release notes for each intermediate version, to see all of the firmware changes that have been implemented.

Note: This document does not provide specific information about any host platform.

Formatting conventions used in this document:

- All references to monitor commands are in `courier font`. Monitor commands for the exposure head are preceded by the `TH2 >` prompt and monitor commands for the host are preceded by the >> prompt.
- All references to NVS parameters are in *italics*.
- All references to scripts are **bold**.

3. LASER SAFETY PRACTICES

To use this document, you *must* have attended an exposure head introductory course given by the Kodak servicetraining department, product specialist, or engineering support team. You must be familiar with the necessary safety precautions when working with a thermal head.

DANGER: *Never operate the host device with the write laser beam on and a door open. Do not use the service bypass jigs to bypass the door interlocks.*

4. RELATED RESOURCES

- Thermal 2 exposure head home page: **TechPlanet** > **Output** > **Heads** > **Thermal 2 Head** (http://techplanet.creo.com/output/heads/thermal_2/nav/index.htm)

- Thermal 2 exposure head firmware: **TechPlanet** > **Output** > **Heads** > **Thermal 2 Head > Control/settings > Firmware releases** (http://techplanet.creo.com/firmware/CTP/Head/Thermal2/versions.htm)
- Thermal 2 exposure head controls and settings: **TechPlanet** > **Output** > **Heads** > **Thermal 2 Head > Control/settings** (http://techplanet.creo.com/output/heads/thermal_2/nav/control-set.htm)
- Thermal 2 exposure head troubleshooting: **TechPlanet** > **Output** > **Heads** > **Thermal 2 Head > Troubleshooting** (http://techplanet.creo.com/output/heads/thermal_2/nav/troubles.htm)
- Service Shell: **TechPlanet** > **Output** > **Service Tools** > **Service Shell** (http://techplanet.creo.com/output/service_tools/service_shell/nav/v2-x/index.htm)
- Controlled Releases: **TechPlanet** > **Output** > **All CTP Devices** > **Control/settings** (http://techplanet.creo.com/output/computer_to_plate/all_ctp/nav/control-set.htm)
- Warning fault 02517 "A data overflow has been detected" occurs when the hotlink cable is disconnected: **TechPlanet** > **Output** > **Heads** > **Thermal 2 Head > Troubleshooting** (http://techplanet.creo.com/output/heads/thermal_2/content/troubleshooting/th2_14_hotlink.htm)

5. NEW FEATURES

The following features were implemented or modified in thermal 2 firmware version 1.06.

5.1 High SR Mode for Focus Laser (PR 9934)

Hosts using light sensitive media need a way to change the focus laser power rapidly. This feature is needed to keep the focus laser from exposing the plate. Head firmware version 1.06 gives the host the ability to place the focus laser into high-SR mode. In this mode, the focus laser will be on, but its power will be very low. The host can not simply turn off the focus laser because the delays involved are too long. Changing the power of the laser is a quick operation.

6. PROBLEMS FIXED

This section lists problems that have been fixed in thermal 2 firmware version 1.06.

6.1 Parameter Configuration Race Condition (PR 9928)

In previous versions of head firmware, when the host sent a parameter configuration command during an edge detect, the focus power was updated. This could potentially cause an edge detect failure. This error is corrected in version 1.06. Now, if the host sends a parameter configuration command during edge detect, the focus laser power is not updated until the head is out of edge detect mode.

6.2 Head Returns Before Focus Power is Adjusted (PR 9929)

When the host requests a focus laser power change, the head returns a value indicating if the power change was successful. In previous versions of firmware, the head would return a value before the focus laser had reached the target power. This is confusing because the host firmware assumes the laser is calibrated. In version 1.06 the head does not return a value until the focus laser has reached the target power.

7. KNOWN ISSUES

The FPGA build that is bundled with 1.06 has a defect in the Hotlink Test module. This causes the following hotlink-not-detected error to be masked.

```
[02516] LVD The data cable is not detected
```

When installing a head with 1.06, be certain that the hotlink cable is connected. If the cable is disconnected, error 02516 will not appear (error 02517 may appear). For details, see "Warning fault 02517 "A data overflow has been detected" occurs when the hotlink cable is disconnected".

8. NVS PARAMETER CHANGES

There were no NVS parameter changes thermal 2 firmware version 1.06.

9. GLOSSARY OF COMMON TERMS

Host	Generic term referring to any output device on which an exposure head is installed.
Exposure Head	Generic term referring to any Kodak exposure head.
Thermal 2, TH2	The thermal 2 exposure head is a thermal exposure head manufactured by Kodak.
High Addressability, HA	The High Addressability exposure head is a thermal exposure head manufactured by Kodak. The electronics of the HA exposure head are identical to the TH2.
Tfx, TFX	The TFX exposure head is a thermal exposure head manufactured by Kodak.
Thermal 1.0 / 1.7x	The thermal 1.0 / 1.7x exposure head is a thermal exposure head manufactured by Kodak.
Monitor Redirection	The thermal 2 exposure head implements its own diagnostic port. Monitor redirection allows you to access the diagnostic port through the host.
NVS	Non-volatile storage. Note that non-volatile storage includes battery-backed up RAM, flash, EEPROM, and so on.
NVS Parameters	NVS parameters allow the exposure head to permanently save calibration and configuration parameters.
FPGA	Field Programmable Gate Array