



Subject: New Firmware for TM-T88IV Printer

Overview

Epson has released an update to the firmware in the TM-T88IV printer to correct internal FIFO issues.

- 11001720 Printer, TM-T88IV No Interface, Fujitsu Black
- 11001729 Printer, TM-T88IV No Interface, Epson Cool White

Item	Current version	New version
Firmware version	10.02 ESC/POS	10.03 ESC/POS

There were several internal updates to the firmware to improve product production and reliability. Below are 2 specific items that MAY affect customers. Note: None of these have been reported to FTXS by any customer. They were found and corrected by Epson.

This firmware should be updated on any units that are returned for repair. Field updates are not recommended. Reference FCA-08-005. A copy of the firmware file and update utility are located on the FTP site below.

Bug

By the combination of printing graphics and command of status sending, printer infrequently becomes busy status.
(Frequency is low. At customers [ON/OFF, printing (Graphics and status sending)]: 1/2429, At endurance test, 1/month.

Condition

Error sometimes occurs when repeat printing Rasta graphics (Rasta bit image) and sending status with intelligent UIB or Onboard USB.

Customer Impact

mail ID [finished data sending] is overwritten in gap of [finished waiting status for received data] function call-back interruption. Reason: For sharing HS pkg sent mail buffer by global definition. Since received wrong mail instead of [finished waiting status for received data], printer becomes loop condition and dead lock until receiving correct mail. By this, printer becomes busy status. It affects to Intelligent UIB and Onboard USB.

Cause & Correction

< Cause >
Since mail buffer of communication task was definite Global, mail was sometimes overwritten by interruption. By being overwritten, become disable to receive expecting mail, then become busy and unrecovery condition.

< Correction >
Fix to change mail buffer Global definition to Local definition.

When printing graphics, printer infrequently becomes busy status while switching DMA transfer.
(Frequency is lower than 1/30 roll papers. Loop script of repeating printing graphics and status sending)

Error sometimes occurs when repeat printing Rasta graphics(Rasta bit image) and sending status with intelligent UIB or Onboard USB.

Right before switching high speed transmission, usual transmission interrupt. At this time, main firmware does not check FIFO buffer data after waiting 200 sec and ban transmission interrupt. So, FIFO buffer data received usually was left. By this, printer becomes hard busy status.
Problem is for being UIB spec. It affects to Intelligent UIB.

<Cause>
NO interrupt zone is long, receiving interrupt occurs at unintended timing.

< Correction >
Add waiting process until reading FIFO data, after waiting 200 us of switching high speed intermission.

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