

THERMAL PRINTER APPLICATION NOTES

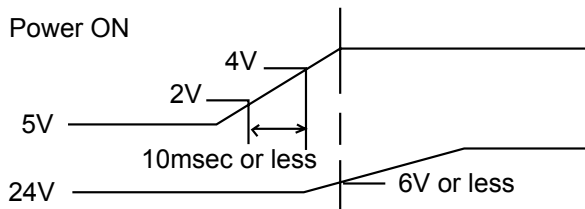
FTP-600 Series

Application Notes

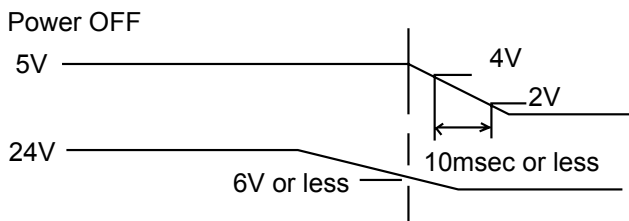
1. Power supply

- (1) Use a power supply with the specified specifications. If the power supply is incompatible, normal operation is not guaranteed and failure may occur.
- (2) For a model which requires two power supplies, 5V and 24V, adhere to the following sequence when power is turned ON and OFF.

2. Print head



After 5Vcc is powered on, 24VH must be powered on. And 24VH must be 6VH until 5Vcc will increase to 80% of rated voltage.



Until 24VH will decrease to 6VH, 5Vcc must be kept more than 80% of rated voltage.

- (3) In stand-by mode, power supply of head must be off.

To keep on stand-by will be the cause of galvanic corrosion, and the head may be damaged.

- (1) As printing progresses, the print head becomes very hot. Do not directly touch the print head and head support plate.
- (2) Do not directly touch the print head. Oil adhering to hands may damage the life of the head.
- (3) Use paper between head and platen when in storage to avoid indent in platen. It will be the cause of failure.
- (4) If printing is performed without setting paper, heat causes a problem for the platen and print head. Do not print when paper is not set.
- (5) Do not print in head-up status. This may damage the life of the head.
- (6) With a runaway driver circuit the head area may generate abnormal heat. It is recommended that a thermal fuse is used to cut power off when abnormal heat is detected.

3. Heating of motor

- (1) The motor becomes hot, so do not directly touch. Consider heat radiation when designing the case.
- (2) When the motor has abnormal heat, internal insulator deteriorates and it may cause a short. It is necessary to use protection circuit using a thermistor, fuse, etc.

4. Paper

- (1) Use specified paper. If unspecified paper is used, printing quality drops and a failure may occur.
- (2) With specified paper, the area outside the roll is the thermo-sensitive face. Set paper such that the thermo-sensitive face contacts the print head.
- (3) Keep the paper such that the roll core is parallel with the printer mechanism. If the roll core is held diagonally to the printer mechanism, paper may be fed diagonally or may jam.
- (4) Do not print when paper jams, which may cause a failure. When paper jams, remove the paper in head-up status. When paper is removed, be careful not to damage the head and platen.

APPLICATION NOTES

5. Water and foreign substances

(1) If the unit is used when water, other liquids, dust, or such metal objects as needles and pins are inside, a failure may occur, and smoking due to a power supply short may occur.

(2) If printing is performed with condensation present, the print head may be damaged. If condensation occurs, completely dry the unit before printing.

6. Shock

The unit is comprised of precision electronic components. Do not drop this unit or hit it with an object, which may cause failure.

7. When not using for a long time

(1) When the unit is not used for a long time, set the unit in head-up status. If this unit is left for a long time with the print head down, the platen may become deformed and print quality cannot be guaranteed.

(2) Do not store in humid place or a place where there is extreme temperatures. When printer builds up condensation, it may be the cause of breaking thermal head and behaviour error.

8. Operating environment

(1) Avoid using the unit in an area which is exposed to direct sunlight or to dust containing oil and iron. If the unit is used in such an area, shield this area from direct sunlight by a case, etc., or implement dust proof measures.

(2) Keep the unit away from equipment emitting high radiation noise, such as high voltage equipment and large motors. If the unit is used near such equipment, take such countermeasures as electro-magnetic shielding.

9. Other

(1) Install the printer horizontally and use it in an area where excessive vibration and shock are not applied.

(2) We recommend positioning the printer mechanism and interface board on an Frame Ground.

(3) If unspecified paper is used, a paper charge may cause a problem.

(4) To install the unit directly to equipment, ground the body with an earth band prior to operation, in order to prevent static electricity.

(5) Do not connect/disconnect a connector when power is ON, which may cause a failure.

(6) When a cable is disconnected in power ON status, the head may be burnt. Be certain that an unnatural force is not applied to a cable. In particular, be careful when connecting a cable between the printer mechanism and interface board, since this cable moves when the print head is up or down.

(7) When the printer is secured, be careful not to apply an unnatural force on the mechanism body, board and flexible printed board. If an unnatural force is applied, distortion or deformation may cause a diagonal paper feed, jamming, noise, a disconnection in patterns, or peeling.

(8) Individual operating suggestions of each product must be confirmed in each specification.

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