BTT-02 card printer manual

iTS - Card

THERMAL TRANSFER CARD PRINTER BTT-02

TABLE OF CONTENTS

1. Introduction

This document describes the procedure for installation, operations and maintenance of the BTT-02 printer installation with TE Connectivity products.

The information is intended to complement the installation training provided by the product specialist upon delivery of your system and will provide a reference point for operator, supervisor and management alike on the operation and maintenance of the system.

This document should be used in conjunction with the relevant TE Connectivity software manual, which contains comprehensive instruction on the operation of the computer software used to print on TE Connectivity products.

1.1. System Contents and Initial Checks

The printer supplied in a BTT-02 thermal transfer printer, which has been designed to print TE Connectivity products. The installation should include the following items: -

1. One BTT-02 printer
2. Power cable
3. Printer cabel (CENTRONICS, parallel interface)
4. Thermal transfer ribbon with spare reel (premounted)
5. Feed-in tray (incl. Screw and distance-piece)
6. Instruction manual
7. Cleaning reel (red)
8. Spare reel (reserve)
9. Automatic Feeder (Optional)
10. Collating tray (Optional)

1.2. Installation

This product should be installed by TE Connectivity approved personnel who will ensure it meets your requirements. (Note: - please ensure all packaging is retained, as the printer should be returned in its original packaging should the need arise.)

During the installation process, the engineer will explain all relevant aspects of the operation of your system. It is important to us to know that we have undertaken this installation accurately and comprehensively and that you are comfortable and confident with the information that has been given. If there are any aspects that you feel have not been covered in sufficient detail or about which you have any concerns, please do not hesitate to raise them

1.2.1. Preparation of installation site

The installation site should be flat and stable. Ensure there is ample space for:

- cable connection
- air circulation through the vents.

Fluids must not come in contact with the printer casing or its contents.

1.2.2 Printer Connections

On the back of the printer you will find the following printer interfaces.

- CENTRONICS (parallel interface)
- RS-232 (serial interface)

Connect the parallel lead supplied to the printer and a printer port on the computer (normally LPT1.)

1.2.3. Power Connections

The power supply unit has an automatic switching primary power connection – 230 V / 115 V – with an inbuilt safety switch/fuse.

1. Switch the main switch off (POWER "O").
2. Connect the power cable to an earthed, wall socket.
3. Switch the main switch on (POWER "I").

1.2.4. Mounting of feed-in tray

The feed tray is used to load the product into the printer.

The two pins on the feed-in tray mounting plate are used to roughly position the tray to the print head. In order to firmly fix the tray use a Phillips' head screw. The standard feed-in tray is made for cards measuring 36-60mm (optional 90mm) wide. Regularly cleaning (using alcohol) the tray surface and guide bar, to remove adhesive residue, will ensure optimal card feed.
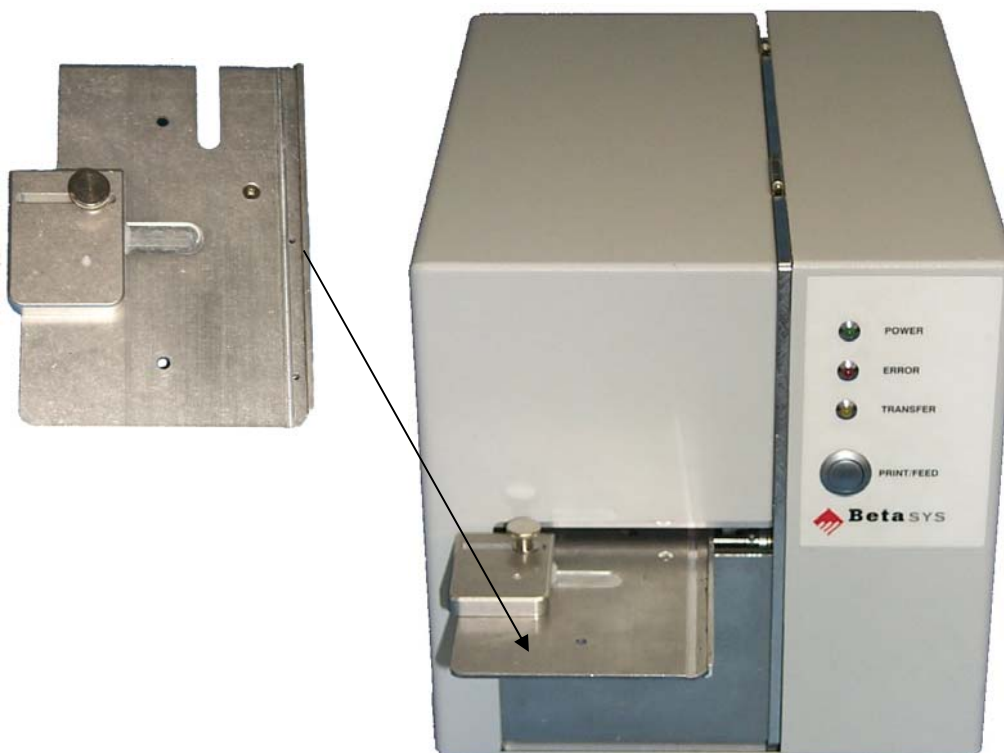
1.2.5. Mounting of Autofeed unit

The Autofeed unit is used to automatically load the product into the printer.

Insert the jack plug into the socket on the front of the printer. The two pins on the autofeed unit are used to roughly position the tray to the print head. In order to firmly fix the unit use the 2 allen screws. The Autofeed unit is made for cards measuring 54mm wide and 86 mm long. Regularly cleaning (using alcohol) the guides to remove adhesive residue, will ensure optimal card feed.
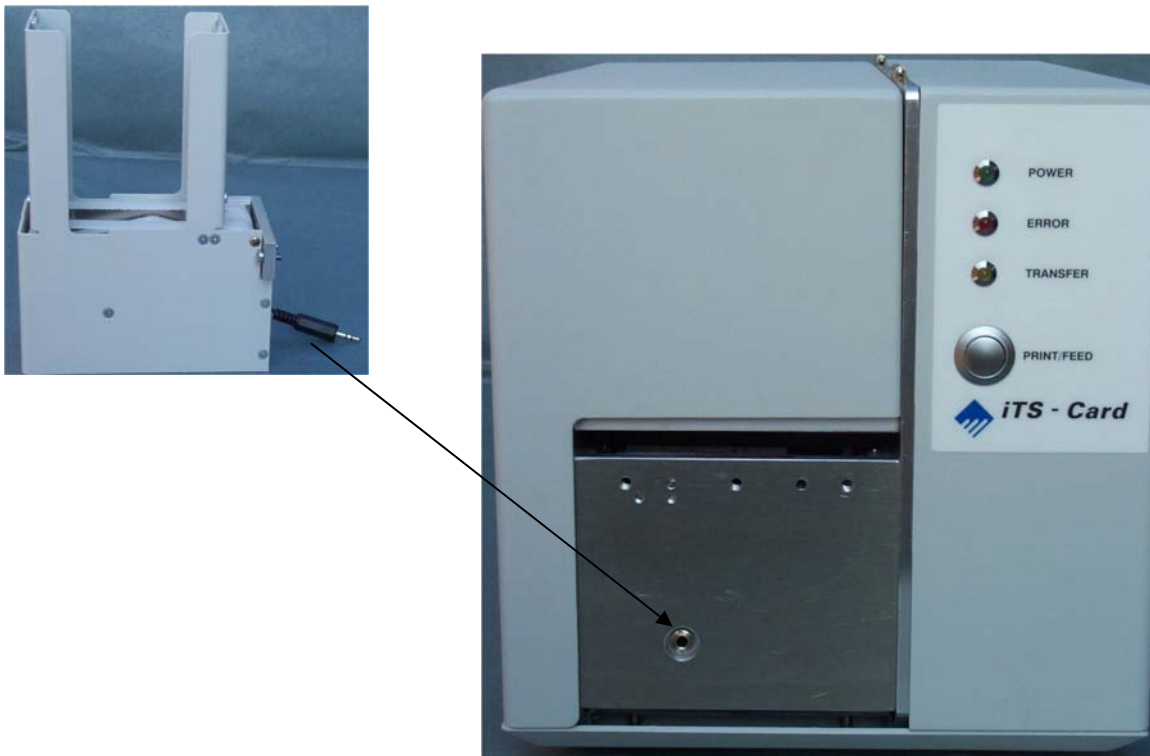
Autofeed assembled

The collation unit should then be attatched to the rear of the printer using the allen screws.
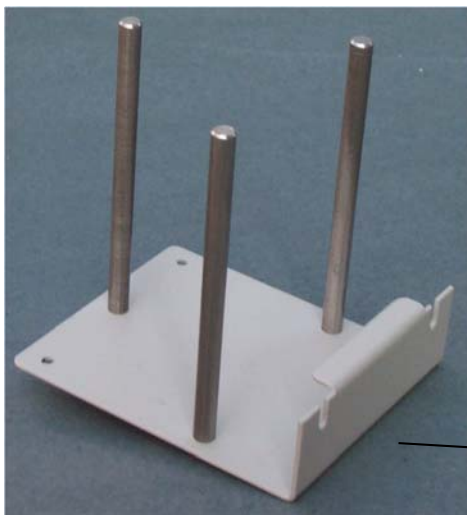
1.2.6. Ribbon installation

To prepare the printer, always use the correct thermal transfer ribbon.

When the printer is switched off, fully open the side cover.

Then open the print head by moving the print head lever to the right.
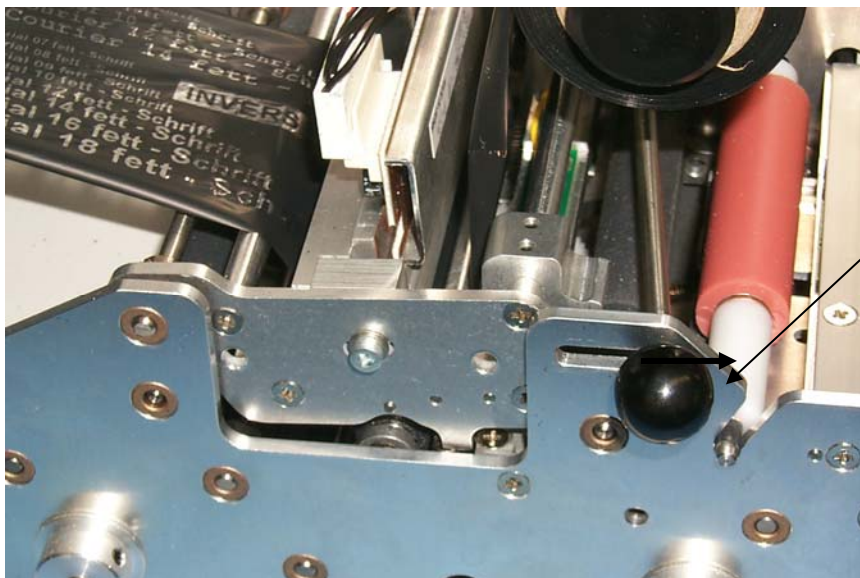
Print Head Lever

Only colour ribbons recommended by the manufacturer will produce optimal results

The ribbon is the loaded as per the intructions below.

1. Insert the ribbon onto ribbon spool **(1)** ensuring the ribbon feeds from the back of the roller as per the diagram below.
2. Feed the ribbon around the roller **(3)** and under the print head. Using a card to help position and guide the ribbon can make this easier.
3. Take the ribbon to ribbon spool **(2).** Insert the blank ribbon core onto spool **(2)** then fix the end of the ribbon, with adhesive tape, to the ribbon core on spool **(2)**
4. Turn the spool clockwise around 2 complete turns to tighten.
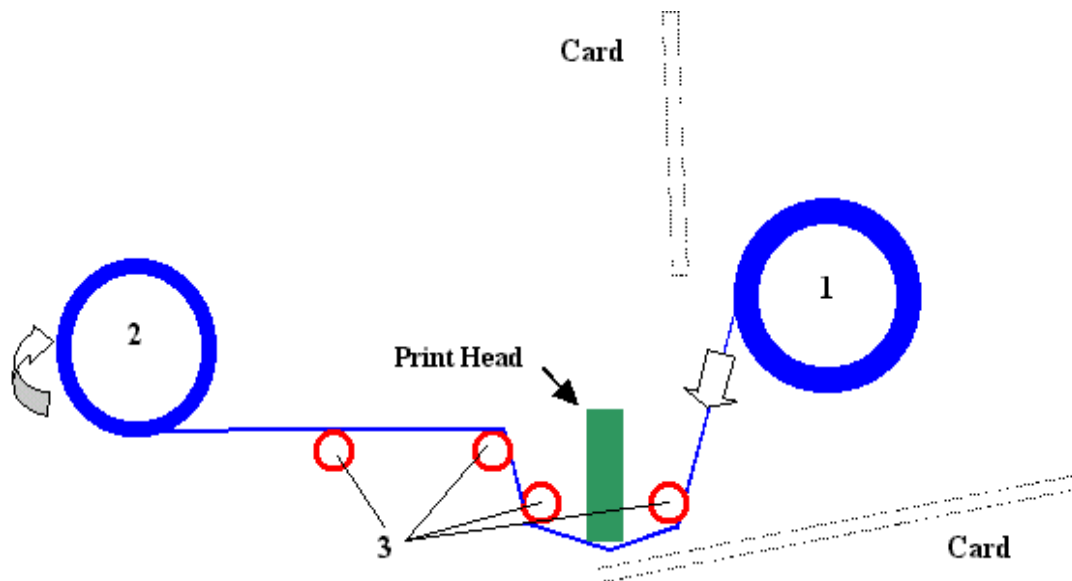
The print head can then be closed down and locked into place by the print head lever.

5. Thereafter, place the cleaning reel (red) into the correct position. Use Phillips' head screws to attach the feed-in tray. The standard feed-in tray is made for cards measuring 36-60mm (optional 90mm) wide.

1.2.7. Adjusting the feed-in tray (checking the printout)

Cards should be centrally feed onto the transport roller. Use the two Worm screws on the mounting plate of the fed-in tray to adjust and align the print image with the card. **Fine tuning is conducted as part of the delivery** *(see enclosed sample cards).* If further image alignment problems occur, conduct a test print using a print file which contains an image with a line parallel to the card edge. If necessary, adjust further.

2. Printer Controls

2.1 LED- display board / RESET function

Three, coloured LED lamps are located at the front of the printer. The following status signals may be seen

Green: **POWER** – shows that the printer is ready to print
Red: **ERROR** – lights up when problems occur
-    Continually red: serious hardware problem, eg. defective print head
- Quickly flashing: warning, press the 'PRINT/FEED' button to solve the problem
- Slowly flashing: hardware problem, eg broken film/ribbon, or no film/ribbon.
Yellow: **TRANSFER** – lights up during data transfer (PC --> printer)

RESET function: Switch off 'Power' switch (POWER "O"), wait 5 seconds, and switch on again (POWER "I"). Performing this function will delete all queued print jobs (ie those sent from PC -->printer).
After performing these funtions it is once again safe to switch the main switch on (POWER "I").

2.2. Printer-generated test card (PC - independent)

This option is used to test the printer wihtout the need for software or a pc.

a) Switch the printer on (POWER "I"), while pressing the PRINT/FEED button.
b) After 3 seconds the green light will flash once to acknowledge that the first test card has been loaded and is ready for print.
c) When switching the printer on and pressing the PRINT/FEED button for approx. 6 seconds, the green LED light will flash twice, indicating that the second test card is loaded and ready for print.
d) To begin the print process simply insert a card until the point where the printer pulls it through and begins to print automatically.

3. Maintenance

3.1 Changing the print head

Pressure roller

Print head

Angle of the print head
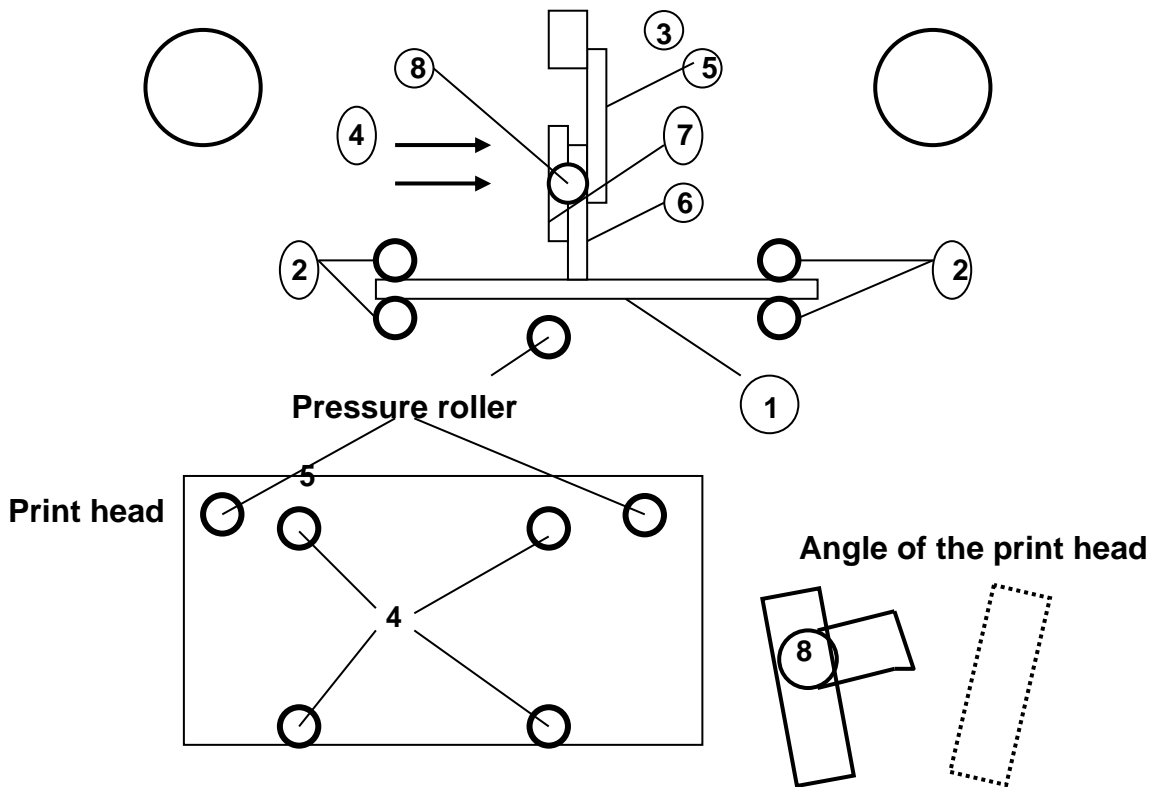
a) Switch the printer off (POWER "O")
b) Remove the ribbon,
c) Pull out both plugs on the print head **(3)**
d) Partly undo two screws **(5)**
e) Using an Allen key losen the four fastening screws and remove the defective print head.
f) Mount the new print head **(6)** and refasten the four screws **(4)**
g) Insert the justification plate from the front **(1)**, between the first pair of transport rollers **(2)**, until it sits firmly in place
h) Press the print head gently onto the justification plate and fix the two screws **(5)** of the print head fixing unit **(7)**
i) Remove the justification plate, switch the printer on (POWER "I") and run a print test. If the print is uneven then repeat steps f) to h) and, if necessary, slightly alter the angle of the print head **(8)**.

3.2. Cleaning the print head and transport rollers

In order to clean the print head, lift it and fix it into the elevated position (white fixing pin). Remove the colour ribbon and clean the print head with a fluff-free, soft fabric dipped in alcohol. After cleaning, replace the print head into position and lock. If both transport rollers are exceptionally dirty, they can be cleaned using a cleaning card (BZZ). This cleaning process is carried out by first switching the printer off, then fixing the print head into the elevated position, then moving the cleaning card backward and forward several times. After the cleaning process is completed replace and lock the print head into position.

4. Trouble Shooting

4.1 Problem elimination

Problem description	Possible problem	Solution
Faulty print File transfer error	Cable defect or no connection Wrong cable	Check connection Check cable
No print	Printer is switched off Defective power fuse Power or print cable not properly connected	Switch printer on Change power fuse Check cable connections
Card runs directly through	Mispositioned print head	Fasten print head into position
No LED lamp display	Printer is switched off	Switch printer on
Print head temperature too high Faulty print	Defective print head Wrong print parameters	Contact manufacturer Check parameters (print driver)
No print (colour ribbon change)	Thermal transfer ribbon is finished/empty	Switch printer off, insert new ribbon, switch printer on
No print (broken ribbon)	Material error (eg ribbon sticks to card) Mechanical error (eg print head positioned too low)	Install new ribbon or review existing ribbon Check card material, check print parameters , Adjust the print head
Faulty print Incomplete print image	Incorrect card material Dirty cleaning reel	Check card material Clean the cleaning wheel
Card not feeding	Card material is too transparent Defective light sensor	Change card material Contact manufacturer
Eneven card feed	Card feeding out of alignment	Change the position of the feed-in tray
Incorrect card output (eg FRONT or BACK)	Wrong print parameter	Check print parameters

4.2 Solving print quality problems

To ensure even print quality use only the thermal transfer ribbon recommended by the manufacturer

4.2.1 Unprinted, grainy, or incorrectly coloured areas

Any of these problems can occur due to uneven card material, or when dirt particles remaining on the card surface after the card has passed the cleaning rail.
In these cases, change the cleaning reel and, if necessary, contact your card supplier.

4.2.2 Unevenly printed card edges

Unevenly printed card edges can be due to card edge 'burr'. The problem can be solved by using other cards, or not printing too close to the edge. If necessary contact your card supplier.

4.2.3 Alterations in print quality following a change of thermal transfer ribbon

Below are possible reasons for lack of contrast following new ribbon installation (despite working to manufacturer's specifications):
- The ribbon was stored too long (Ribbons have a six month shelf life.)
- Check the print parameter

4.2.4 Horizontal lines

It is imperative to clean the print head immediately if unintentional white lines or dots appear in the print area.
If the problem persists after cleaning the print head, the print head is defective and must be changed.

5. Technical information

Model: Thermal transfer card printer BTT- 02
Print method: Thermal transfer
Print speed: variable up to 100mm/sec.
Print resolution: 300dpi
Interface: serial (RS 232); parallel (CENTRONICS)
Controller: 80386EX Micro processor
Memory: 512 KB
Input power: 250 VA 110V/220V, 240V --> 50...60Hz
Dimensions: (H, W, D) 220mm x 210mm x 270mm
Weight: 6,9kg incl. Feed-in tray
Card feed: Manual via feed-in tray (optional magazine)
Card material: PVC, ABS, Polycarbonate (only manufacturer-recommended card material)
Card size: 54 x 300mm (optional 90 x 300mm)
Max. print format: 54 x 300mm
Card thickness: 0,3 – 1,5 mm
Cleaning reel: Silicon reel (water cleanable/washable)
Operating conditions: dry, normal room temperature (20°C)
Operating environment: normal industrial situations

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