**PRODUCT INSTALLATATION PROCEDURE
HX and HLX Thermal Transfer printing Guide**

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1   INTRODUCTION

This document replaces all revisions of EIL-PIP-017.

2   PRODUCT STORAGE

All HX and HLX marker products must be kept in a clean area, free from contamination. Any contamination, (e.g. dust, grease, condensation, excessive handling) may seriously affect print quality and performance. Whenever possible, return unused product into its original packaging.

Markers should be stored in their original packaging in a clean dry area out of direct sunlight. The temperature should be between, -10ºC to +40ºC (14°F to140°F) and within 45% to 55% RH (Relative Humidity).

3   RIBBONS

NOTE: -   THE 1966-RIBBON IS THE ONLY RIBBON APPROVED FOR PRINTING HX and HLX. USING ANY OTHER RIBBON MAY NOT MEET THE PRINT PERMANENCE SPECIFICATION AND LIFETIME EXPECTANCY REQUIRED.

3.2   RIBBON STORAGE

Un-opened ribbons should be left in their original packaging. The recommended storage temperature is 5 to 24°C (41 to75°F).

3.3   RIBBON LIFE

The 1966-ribbon will print approximately 300m in length of HX formatted product (approx. 1150 pages).

Thermal transfer ribbons cannot be reused.

The ribbon should also be discarded and replaced if the ribbon is beyond its shelf life date, clearly marked on the ribbon core, and outer packaging.

Failure to carry out this procedure could result in poor mark permanence.

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4   PRINTER SETUP

When product and ribbon is loaded, and before printing has commenced, the printer must be calibrated.

T312M
Printer calibration is normally carried out by using WinTotal's calibration option in the print screen.

High Energy and Half Speed options must be selected (and are defaulted) when printing HX marker sleeves and HLX cable markers.

For more details on printer set-up and alternate methods of calibration, refer to 412-121007, T300 series TT printer system user guide (EIL-PIP-006).

TE3124 (600dpi)/**TE3112** (300dpi)
Printer calibration is carried out automatically, when ribbon and product is loaded and the printer is switched on, with the Print head closed Auto calibration will be initiated before the first print job. If the Print head remains closed, no further calibration will take place.

For more details on printer set-up refer to 412-121024, TE3124 Operators manual (EIL-MAN-031)
For more details on printer set-up refer to 412-121026 TE3112 Operators manual (EIL-MAN-033)

T212M (300dpi)
Printer calibration is carried out by using WinTotal's calibration option in the print screen.

For more details on printer set-up refer to 412-121002, T200 series printers Operators manual (EIL-MAN-002)

5   PRINT SETTING

Optimum settings are automatically selected in the TE WinTotal software package. If however acceptable print quality can't be achieved, adjustments to the Darkness settings can be made in the internal printer menu. Increasing the darkness value, will normally improve the print quality.

For more details on printer set-up refer to:
For T312M, 412-121007, T300 series TT printer system user guide (EIL-PIP-006)
For T212M, 412-121001, T200 series printers Operators manual (EIL-MAN-002)
For TE3124, 412-121024, TE3124 Operators manual (EIL-MAN-031)
For TE3112, 412-121026, TE3112 Operators manual (EIL-MAN-033)

6 PRINT QUALITY CHECKS

At the start of each day's printing the procedure in section 6.1 Quality Check Procedure should be followed.

The following test equipment is required

- 412-121002, TE Print Contrast Reference Scale. (EIL/PIP/014)
- Mars Plastic Eraser (or an eraser with Shore A hardness of 50 – 70)

6.1 QUALITY CHECK PROCEDURE

1. Print ten markers with the best quality settings possible.

2. The printed markers should have a contrast rating of ≥ 9 when compared with 412-121002, TE Print Contrast Reference Scale (EIL/PIP/014).

3. 15 minutes after printing, take three of the markers and rub the print on each one 20 times in one direction, using the Mars Plastic Eraser. Very firm hand pressure (4KG) should be applied when rubbing. The rubbed markers should have a contrast rating of ≥ 8, when compared with 412-121002, TE Print Contrast Reference Scale (EIL/PIP/014).

4. Note down the contrast score obtained.

5. *Also note the ribbon description, batch number and expiry date. Check daily that the ribbon being used is not beyond its expiry date.*

If any of the above checks fail please follow the procedure below,

- Check the printer set up is correct as per Section 4 - Printer Set up

- Check the software set up is correct, increase the darkness setting if possible – see Section 5, Print settings.

- Check the ribbon in shelf life and replace if appropriate.

- Follow the relevant printer maintenance guide as per Section 7 - Printer Maintenance

  If the procedure still fails after all the above checks have been carried out, then contact your supplier's Technical Support.

7   PRINTER MAINTENANCE

All Thermal transfer printers need to be kept clean to give trouble free operation. The relevant maintenance procedure should be completed at least once a month.

7.1   Thermal transfer printer maintenance procedure

1. Turn the printer off and remove all product and ribbon. Clean the outer and inner case, with a dry cloth and cleaning material supplied in the TE Thermal transfer cleaning kit. Vacuum out if the printer is extremely dirty.
2. The print head should be cleaned after each roll of ribbon has been consumed. This should be done using the TE Thermal transfer cleaning kit.
3. Re-load both product and ribbon, Turn the printer back on.

8   PRODUCT INSTALLATION

8.1   SLEEVE INSTALLATION

Sleeves should not be installed unless a print contrast rating of ≥ 8 is found when compared with 411-121002, TE Print Contrast Reference Scale (EIL/PIP/014). Make sure the sleeve is clean and free from dirt, moisture or grease before installing the marker sleeves.

8.2   SLEEVE SHRINKING

HX sleeves are designed to provide permanent wire marking and will normally be shrunk into place on the wire. Where specified recover the sleeve snugly onto the wire; minimum shrinking temperature is 135ºC for HX sleeving.

Some applications do not require shrinking (for example, if the sleeve must be rotated so legends printed on both sides can be read); note that HX products will meet the permanence standards set out in TE specifications even without shrinking.

Sleeves should be shrunk in accordance with **412-121008**, **Installation of Heat Shrink Marker Sleeves** (EIL/PIP/015).

9   RELATED DOCUMENTS

Reference number	Title	(Manual/PIP)
411-121007	**T300 series TT printer system user guide**	(EIL/PIP/006)
411-121008	**Installation of Heat Shrink Marking Sleeves**	(EIL/PIP/015)
411-121002	**TE Print Contrast Reference Scale**	(EIL/PIP/014)
412-121001	**T200 series printer Operators manual**	(EIL-MAN-002)
412-121024	**TE3124 Operator's manual**	(EIL-MAN-031)
412-121026	**TE3112 Operator's manual**	(EIL-MAN-033)