J750 Test System Probe Card Debug Tool Installation Manual

613-504-00 Rev. A

TERADYNE
Because Testing Matters

PN 613-504-00

Rev A

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About This Manual

Installation Manual

This manual describes how to install the J750 Test System Probe Card Debug Tool (p/n 610-115-00) to the customer's probe tower and probe card. All instructions assume that both the J750 tester and the prober are installed and fully operational.

This manual is intended for trained maintenance personnel. The local Teradyne Service office can assist with any additional questions you may have about the J750 Test System or this tool.

We welcome any comments or feedback you have about this manual, the debug tool or the J750 Test System. Please send feedback to: J750Support@teradyne.com.

For your convenience, we have also included a Manual Comment Form at the end of this document.

Viewing This Document Online

When viewing this document online, you may click any hyperlink, cross-reference or page number to jump to that topic.

Additional Documentation

The following documents may provide additional information when using this document:

- J750 - 512 Pin Test System Service Reference Manual, p/n 552-360-33
- J750 - 1024 Pin Test System Service Reference Manual, p/n 552-360-34

Revision History

Revision Date	Reason for Change
A	Initial Release

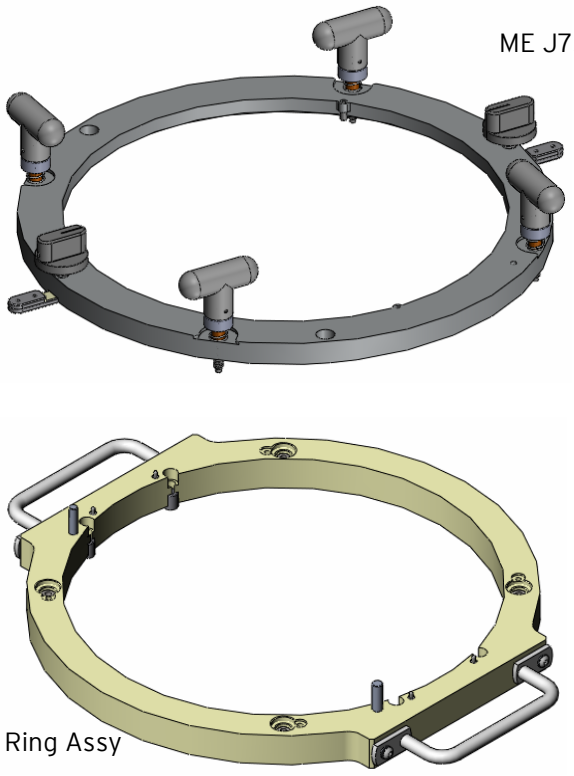
Overview

The J750 Test System Probe Card Debug Tool (p/n 610-114-00) comes ready to assemble to the customer's probe tower and probe card. The main components of the tool are:

- ME J750 Debug Tool Top Ring Assy (p/n 608-736-00)
- ME J750 Debug Tool Base Ring Assy (p/n 608-737-00)

The tool is used to facilitate probe card troubleshooting by holding the card to the probe tower while the tester is undocked from the prober.

The figure below shows the main components of the debug tool.



ME J750 Debug Tool Top Ring Assy (p/n 608-736-00)

ME J750 Debug Tool Base Ring Assy (p/n 608-737-00)

Probe Card Debug Tool Main Components

Installation

Overview

The Installation section provides information and procedures for the following:

- Unpacking the Probe Card Debug Tool
- Installing the Probe Card Debug Tool

Unpacking the Probe Card Debug Tool

The tool is shipped in a single case. Prior to starting installation, open the case and ensure that the following items are present:

- ME J750 Debug Tool Top Ring Assy (p/n 608-736-00)
- ME J750 Debug Tool Base Ring Assy (p/n 608-737-00)
- J750 Test System Probe Card Debug Tool Installation Manual (p/n 613-504-00)

Installing the Probe Card Debug Tool

This section of the manual describes the procedures for installing the J750 Test System Probe Card Debug Tool.

Note

These instructions assume that both the tester and prober are installed and are fully operational. Do not attempt to install the kit if this is not the case.

The following tools are required to install the kit:

- #1 phillips screwdriver
- 5/32" hex wrench
- 3/16" hex wrench

Perform the following steps to install the debug tool:

Preparing the Tester

Prior to installing the Probe Card Debug Tool, the J750 tester must be prepared as follows:

C A U T I O N !

Always wear a tested grounding strap while working on the J750 tester.

1. Ensure that the tester is fully undocked and a sufficient distance from the mating equipment.
2. Position the tester so that the DIB mounting surface faces up.
3. If installed, remove the probe tower form the tester.

C A U T I O N !

Always ground the Customer PIB or calibration DIB when installing or removing it from the DIB fixture on the tester.

4. If installed, properly ground the Customer PIB or Calibration DIB as outlined in the Grounding Calibration and Customer DIBs section of the Maintenance Chapter of the J750 - 512 Pin Test System Service Reference Manual or the J750 - 1024 Pin Test System Service Reference Manual, as appropriate.

5. Push the red Power Off switch on the front of the J750 tester to turn off power.
6. Place the DIB vacuum switch on the tester to the UNLOCK (off) position.
7. Remove the Customer PIB or Calibration DIB from the tester, then remove the ground connection. Place the PIB/DIB onto a proper work surface.

Installing the Probe Card Debug Tool

> **C A U T I O N !**
>
> Always wear a tested grounding strap while working on the J750 tester.

1. Properly ground the customer PIB then place it onto the DIB fixture of the tester. The figure below shows the PIB Installed onto the tester.

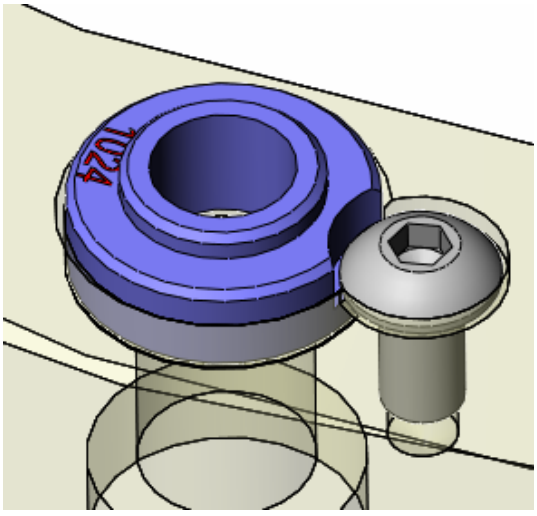
PIB Installed on Tester

2. Place the DIB vacuum switch on the tester to the LOCK (on) position.
3. Press down on the PIB to ensure it seats properly. Apply pressure to the PIB in the area directly above the pogo blocks.
4. Remove the ground connection from the PIB.
5. Remove the four (4) phillips head screws from the bottom cover of the probe tower using the no. 2 phillips screwdriver then remove the cover from the tower.

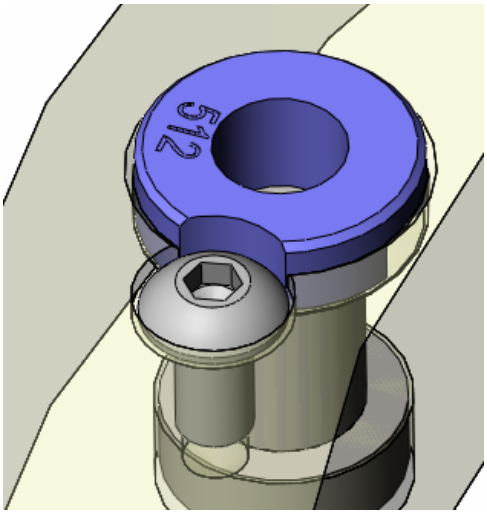
6. Place the probe tower onto the PIB.

Probe Tower Installed on PIB

7. The debug tool is shipped for use with a 1024 Pin Tester, if it is being used on a 512 Pin Tester perform the following steps:
   - Remove four (4) 1/4-20 BHCS #10-32 x3/8" SS.
   - Remove the spacers from the counter bore hole and flip it over so that the 512 engraved on the bottom of spacer faces up.
   - Replace the spacer so that 512 engraving is visible. Secure the spacers with four (4) 1/4-20 BHCS #10-32 x3/8" SS.
   - Replace the spacer so that 512 engraving is visible. Secure the spacers with four (4) 1/4-20 BHCS #10-32 x3/8" SS. The figure below shows setting for both 1024 and 512 pin tester.



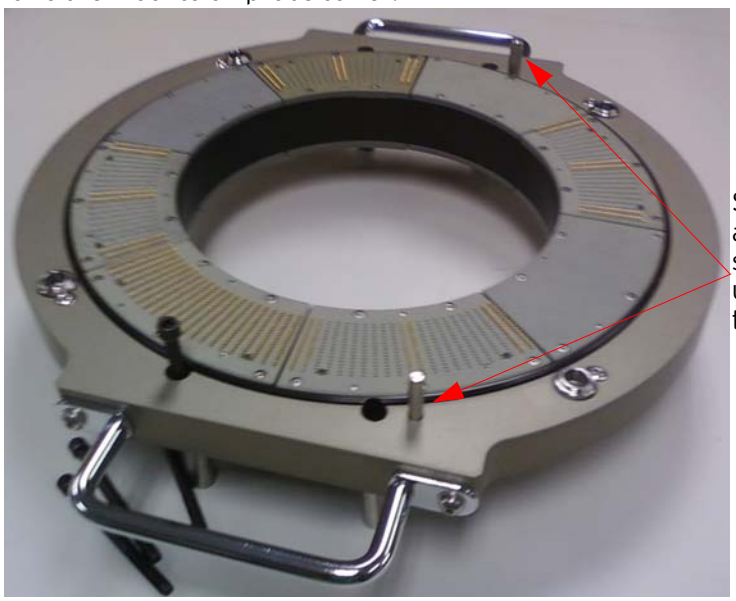
Using 1024-pin Tower



Flip to use with 512-pin Tower

Spacer Position for both 1024 and 512-pin Tester Configuration

8. Once the spacers are properly configured, place 608-737-00 onto the probe tower. The figure shows the mounts on probe tower.

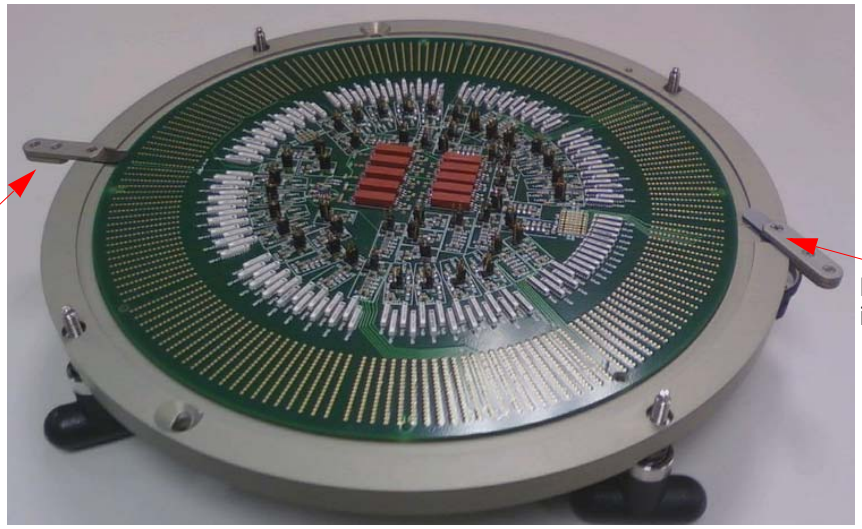


Base Ring Assy Assembled to Probe Tower

Note

Tighten the screws in a cross pattern, tightening each screw a little bit each time until they are secure.

9. Secure the Base Ring Assy (608-737-00) to the probe tower using the four (4) 1/4-20 x 3" (supplied with 608-737-00) long socket head screws. Tighten the screws using the 3/16" hex wrench.
10. Place the Top Ring Assy (608-736-00) onto a proper anti-static work surface so that the four (4) captive screw knobs face down and the two (2) lever assemblies face up.
11. Lift and turn the knobs on the ring assembly so that the latches are in the open position. The figure below shows the latches open.



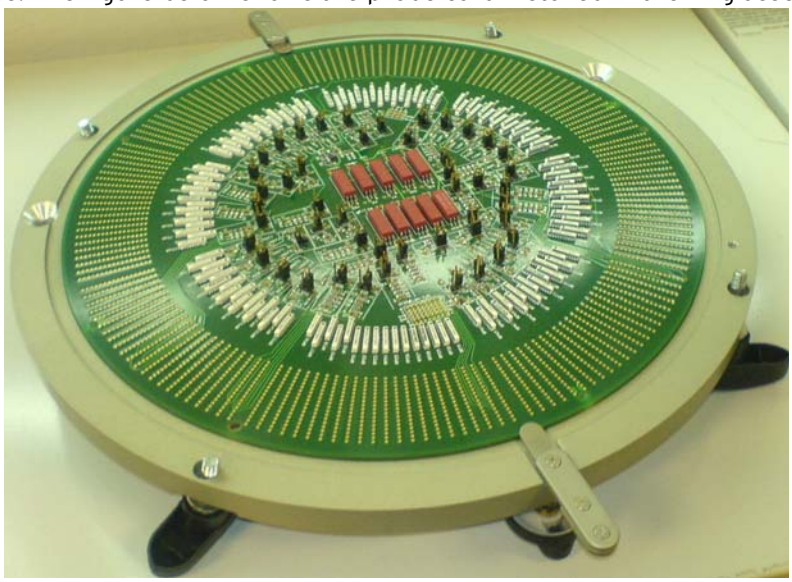
Top Ring Assembly with Latches and Probe Card

12. Place the probe card onto the ring assembly with the probe side down.

Note

Be sure to line up the pins on the ring assembly with the mating holes in the probe card.

13. Once the probe card is properly oriented in the ring assembly, close the latches to secure the card in place. The figure below shows the probe card installed in the ring assembly.



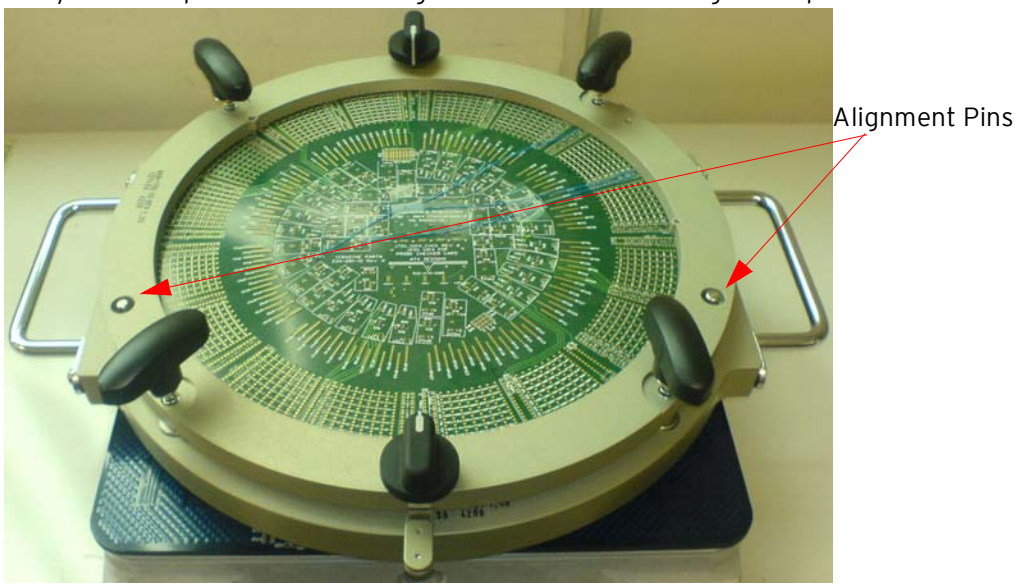
Probe Card Installed in Ring Assembly

14. Remove the four (4) phillips head screws from the top cover of the probe tower using the no. 2 phillips screwdriver then remove the cover from the tower.
15. Turn the Top Ring (608-736-00) over so that the probe side of the probe card faces down.

Note

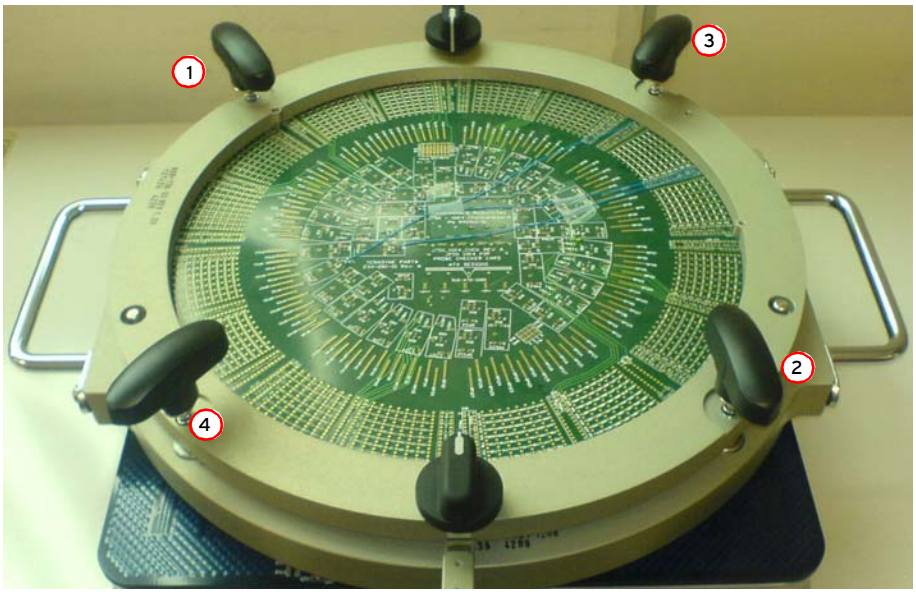
Make sure to keep the ring assembly parallel to the tester as you place it onto the probe tower.

16. While sliding the holes in the ring assembly over the alignment pins on the mounts, place the ring assembly onto the probe tower. The figure below shows the alignment pin location.



Mount Alignment Pin Location

17. Secure the Probe Card and Top Ring Assy. to the Base Ring Assy. by tightening the four knobs. Tighten the knobs in an alternating pattern to ensure even compression of the signal pins in the Signal Delivery tower as shown in the figure Securing the Probe Card Using an Alternating Pattern. Tighten two knobs across from each other simultaneously.
    - Knob Location 1 and 2
    - Knob Location 3 and 4



Securing the Probe Card Using an Alternating Pattern

Personal Notes

Manual Comment Form

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Manual	Name	
	Document No.	
	Revision No. and Date	
Sender	Name	
	Company	
	Job Title	
	Address	

1. Briefly, in the space below, how would you describe this manual?

_____

_____

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2. How do you use this manual?

__ I read it from beginning to end.

__ I only read the sections that pertain to my immediate needs.

__ I only read the sections that pertain to my job.

__ I use this manual for training purposes.

__ I use this manual for reference purposes.

3. When you need to find information in this manual, where is the first place that you look:

__ Table of Contents

__ Thumb through the pages until I find what I am looking for

4. How easily can you find information in this manual?

1 2 3 4 5

Not easily Very easy

5. How clear is the information in this manual?

1 2 3 4 5

Not clear Very clear

6. When you actually try instructions in this manual, how easily can you follow them?

1 2 3 4 5

Not easily Very easy

7. How well did you understand the product before reading this manual:

1 2 3 4 5

Not at all Very well

8. After

1	2	3	4	5
Not at all				Very well

9. Was all of the information you needed included in this manual?

__ Yes

__ No

If not, what was missing?

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10. The best aspect of this manual is:

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11. If you could change one aspect of this manual, what would it be:

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Other comments:

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USA

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