

Introduction

This Test Interface is a hand held test clip, designed to probe simultaneously the leads of an assembled IC from underside the PCB. Terminated with two 25 way male "D" type connectors, the interface makes temporary electrical contact with the leads of the device, in a two step action as follows:

- the interface is positioned over the device leads (from underside the PCB) to be tested (lining up the test interface pins with the leads of the device that protrude through the PCB)
- by pushing the handle further, reliable contact should be made with the device under test.

Specification

- This is a generic clip that will test (from the solder/underside the PCB) devices with:
 100 thou pitch leads,
 0.6" and 0.9" spacing,
 24 pins to 48 pins;
- Current rating, with all contacts loaded (maximum continuous current, non inductive): 0.5A /channel;
- Contact resistance (average): 80 m Ω /channel;
- Insulation resistance: 5M Ω Min.
- Volume resistivity of plastic parts : 10¹⁵ Ω -cm @ 50%RH.
- Fatigue life of probes: Min. 100,000 cycles;
- Working distance (normal stroke): 6.35mm;
- Probe force at point of contact : 1.1N

Changing Pins and configuring

- It may be necessary to remove/add pins in order to either convert widths (0.6" and 0.9") or to increase/decrease the pin count;
- 53 probes (5 spare) are supplied with this clip but only 48 are fitted as standard in the 0.6" configuration (unless requested otherwise);
- To remove the pins, use a suitable pair of pliers and pull squarely from each receptacle ensuring no damage occurs to the pins.
 (a specific pin remover is available upon request);
- To add pins, initially insert by hand and then (ideally no more than two at a time) press them squarely against a flat surface until fully inserted.



Features

- achieves the best combination of reliability, repeatability, serviceability and user-friendliness;
- concave probe tips shipped as standard to assist in location and positioning of test interface with device;
- high reliability and long life interchangeable probes, various tip styles available upon request, supplied with concave variant;
- sweeping action gold plated contacts, for reliable contact and low ohmic resistance of interconnections;
- high current rating (for single channel, in ambient air with 70°F [20°C]) : 1.5A
- impact, solvent and temperature resistant plastics, with low friction;
- wide range of operating temperatures (commercial): [0°C to +70°C]
- clear markings on the body, indicating Pin 1 of IC being tested, to prevent probing the wrong way round;
- packaged in a hard wearing, high resistance to damage Polypropylene case with foam insets, the Test Interface can withstand high impact in transit.
- case can be used for safe storage when the Test Interface is not in use, and subsequent transport.
- very flexible harnessing to assist in positioning of Test Interface;

Connections Table

Device Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Pinpoint Channel	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48

Device Pin	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Pinpoint Channel	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1

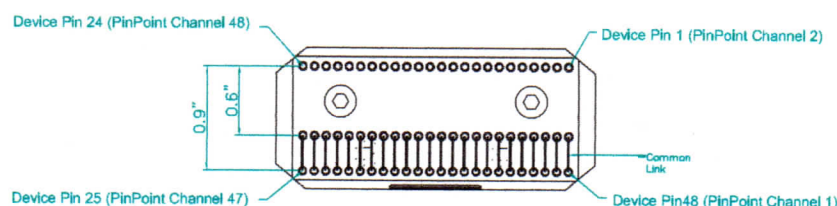
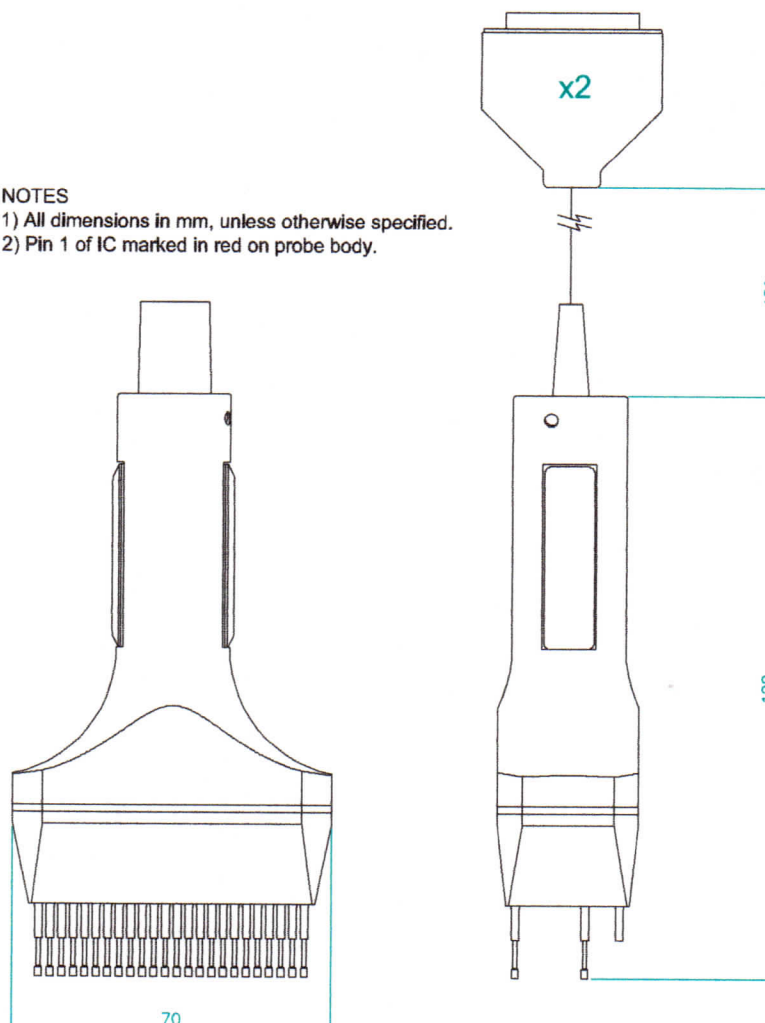
KEY

BLUE = Connector 'A'

RED = Connector 'B'

NOTES

- 1) All dimensions in mm, unless otherwise specified.
- 2) Pin 1 of IC marked in red on probe body.



Maintenance

The Test Interface Head is maintenance free. Immersion in water or contact between microprobes and any liquids should be avoided, as this could severely reduce the working life of the probes.

Contamination is the primary cause of probe contact problems. This is generally caused by flux left as a residue on circuit boards. Other probe contaminants such as dust, fluff, oil and grime can also cause problems in other areas. Light brushing of the tips of the probes with nylon, bristle or soft metal brushes will dislodge most contaminants.

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Diagnosis Test Systems Limited can provide a full range of test clips to meet individual requirements. Any common device packaging styles can be accommodated, or custom designed clips manufactured, for device pitches of 0.4mm and above.

UNDERSIDE TEST INTERFACE PROBE PIN WIDTH CHANGE

For use with DTI Part numbers 41-0470 and 41-0510

The use of the Underside Test Interface (UTI) Probe greatly expands the use and functionality of the PinPoint systems. With this device, IC's that were not able to be functionally tested due to board architecture not allowing the use of standard "Dual-in-Line" IC clip can now be tested.

This is accomplished by the technician placing the probe on the "backside or solder-side" of the board directly underneath the IC in direct contact with the bottom leads.

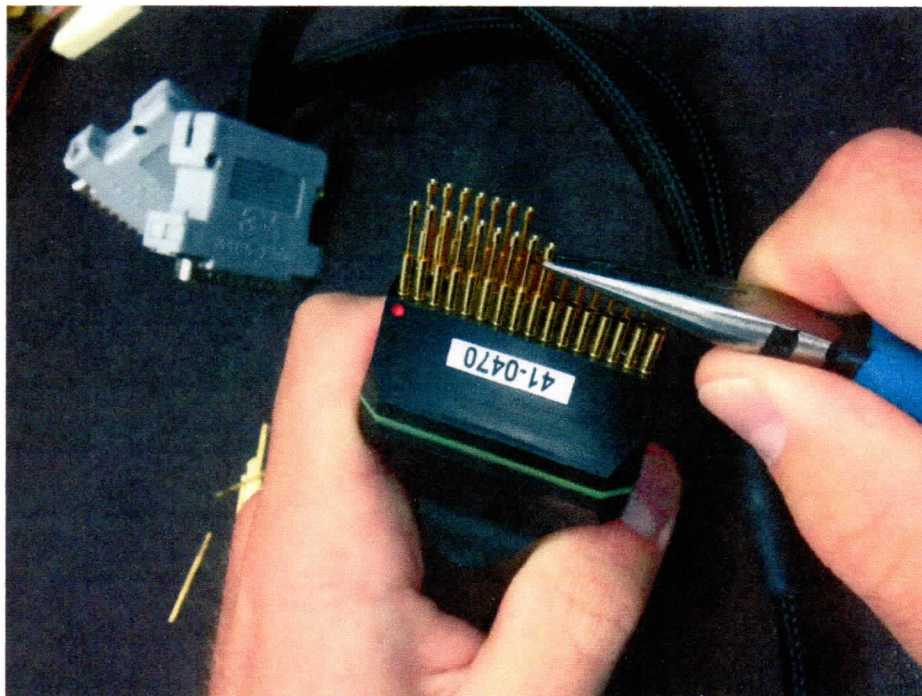


Any Conformal Coating will have to be removed first

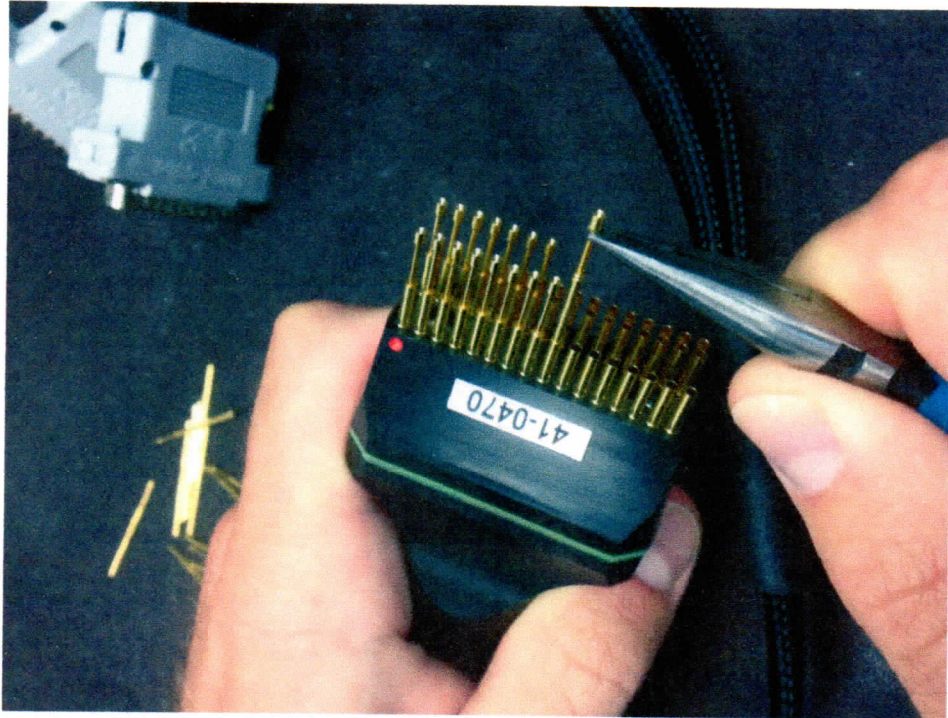
One of the features of both types of the UTI provided is the ability to change the width of the UTI pins to accommodate narrow or wide IC's. Simply by moving one row of pins to another row the width can be widened or reduced. This illustrated guide will help get you started.

Pin Removal

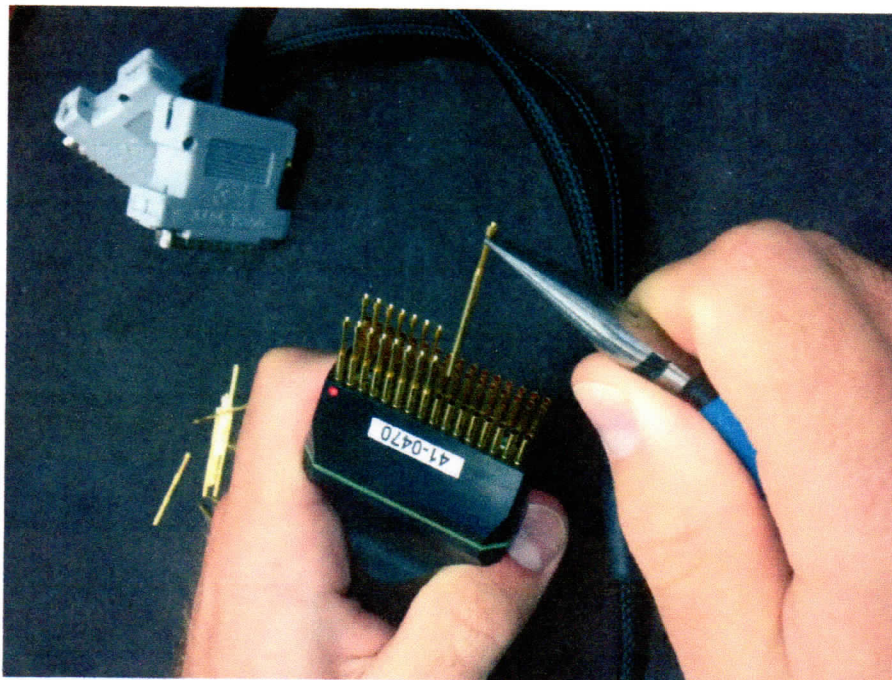
- a) Obtain Needle Nose Pliers.
- b) Grasp an end pin with the needle nose just under the top cup on the pin.



- c) Pull straight up on the pin away from the UTI with the pliers.



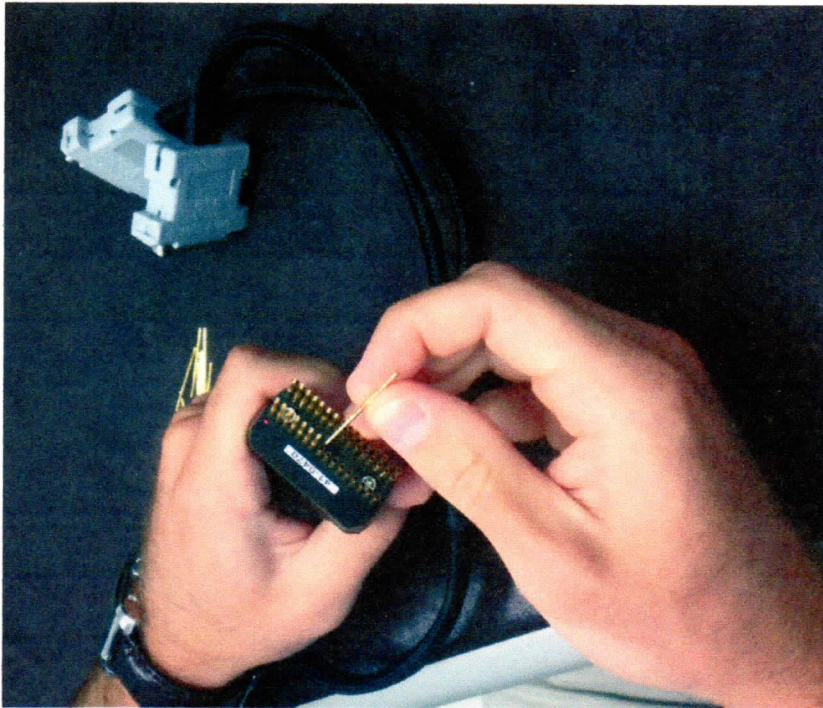
- d) The pin should come out with a little effort, but be careful to keep the pin as straight as possible while removing it.



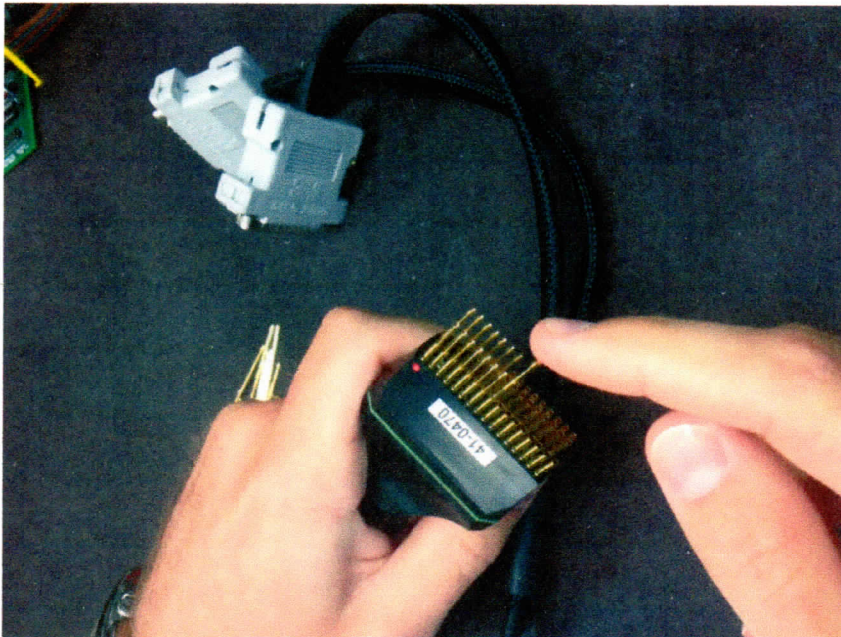
- e) Continue to do this until all pins in the row have been removed.

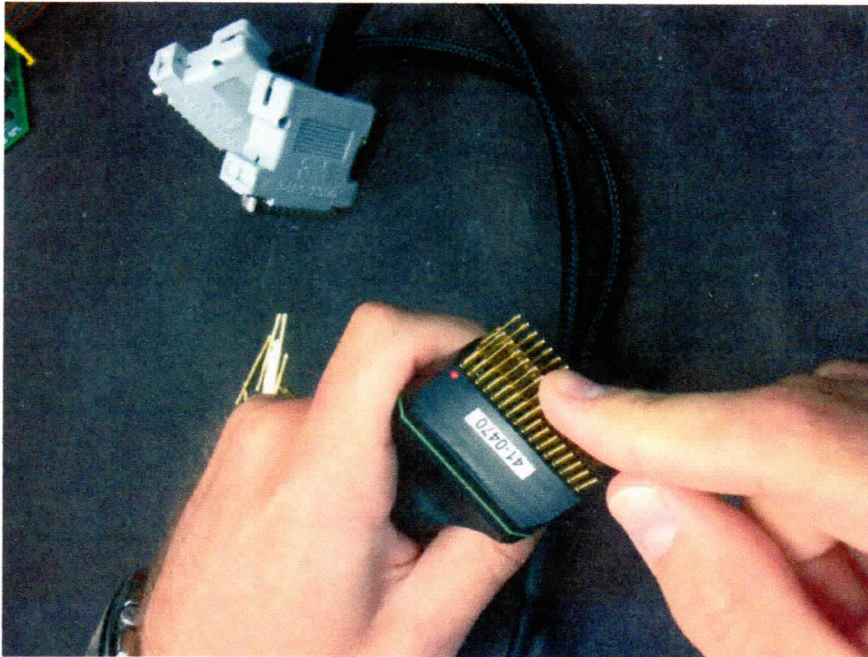
Pin Insertion

- a) This is simply pushing the pin into the new slot. Start by placing a pin in a vacant receptacle in the desired width slot.

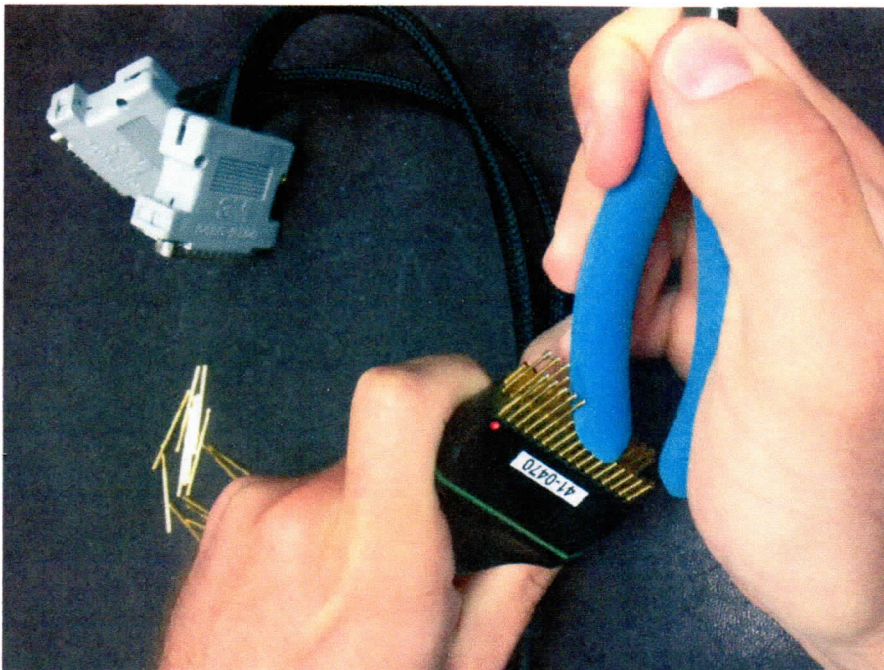


- b) With your fingers, gently continue pushing the pin in.





c) Then, using the end of your pliers ensure that the pin is fully seated in the receptacle.



d) Continue this procedure filling the selected row with the desired number of pins.

USE OF UTI WITH PINPOINT TEST ROUTINES

No two Test Routines are exactly alike; the selected routine will give instructions on which UTI to use and configuration. It will also highlight the appropriate connection spot for the UTI's end connectors to plug into.



*****CAUTION*****

Care must be taken when connecting the probe; you must connect the UTI pin with the red dot next to it onto pin one of the IC, remembering that you are on the underside of the IC. Improper connection may result in damage to the board or the PinPoint.