

Futura Apsol Pvt Ltd., Pune.

FAQ's for FUTURA HTM and PHTM Testers ver 2.2 Jult 2017

Frequently Asked Questions: FAQs

1: On 'power on' there is no display:

- Check for loose power supply cable i.e. mains cord, input mains plug as well as socket.
- Check Fuse (750mA, normal). If 'blown' replace with spare one available in the fuse holder.
- If still no display, and always fuse blows, then
 - Remove the back plate of tester.
 - Cut blue colour MOV which is soldered on switch.
 - Now insert new fuse and switch ON the tester.
 - Arrange for new MOV. It is protecting the tester from high voltage.

2: Display is "NO CARDS":

- Switch off the mains supply, press **I/O** card/s. Switch on the supply.
- switch off the power supply, remove **I/O card/s** and clean the edge connector on **I/O card/s** using trichloroethylene or **CTC**. Insert the **I/O card/s** properly and check the tester.
- Check connections from Mother Board to Edge connectors.

3: After passing a harness tester displays "Remove Cable". Even after removing cable, tester does not display "Put Cable".

- It means that tester finds some points internally shorted even if harness is removed.
- Conduct self test after removing harness from the board. Tester will display shorted points. Check these points on the board.

- If problem persists, separate board from tester at board end and conduct self test. Check for shorted points from tester to board.
- If problem persists, remove cable from back side of the tester and conduct self test. Check for shorted points and replace appropriate I/O card.

4: How to increase number of points i.e. capacity of tester?

- Capacity of PHTM320 is maximum 320 points and PHTM640 is maximum 640 points. If tester has less number of I/O cards than its maximum capacity, *it can be increased by adding an I/O card in the next available slot.*

5: Tester shows “no point” after selecting a cable number. :

- For HTM tester press all IC's on main CPU PCB.
- For PHTM tester press memory IC (24c512) in tester, in which all programs are stored.

6: Tester remains in receiving mode even after transmitting data from PC.

- Check connection of serial cable, Y end to PC and single end to tester.
- Replace serial cable.
- Check communication port number selected on PC software and it is connected and working. (COM port, com1 / com2 etc.)
- If problem persists
 - Open the tester from back side.
 - Check all wire connection of 25 pin 'D' serial connector.
 - Check whether MAX232 IC is heating at the time of communication.
 - If problem found in the IC then replace it.
 - Send CPU PCB to Futura for repair.

7: Erratic behavior of tester. Suddenly displays a point number which is not in the circuit. Suddenly shows any error. Displays "no card". etc.:

- Check for proper earthing at the power supply input point of tester. It should be proper i.e. voltage in Live L & Neutral N and voltage in L and earth E should be almost same and @230V for 1phase and less than @ 8 V in N and E earth.

8: After pressing 'Test' key, tester displays 'Receiving' and 'hangs':

- It means barcode reader option is switched on. To switch off, press 'LRN', 'up' or 'down' till display is 'disable barcode?'; Press 'enter', display will be 'bar reader off'.

9: After passing of harness, tester displays "No Points "or "Open xxxx" instead of "Remove Cable":

- Checks no of stages selected for the respective cable number, if 2 stages are set then make **stages 1**.
 - Again select same Cable Number.
 - Press ENTER on 'OFF 2 STAGE?' Option

10: After passing of harness, tester remains "Pass xxx" instead of "Remove Cable"

- Check mode of testing, if **Manual** mode is set, change it to **Auto** mode through power on learn key.
 - Switch OFF the tester.
 - Press 'LRN' key on Keyboard and switch ON the tester.
 - One curser will blink on display. Now release 'LRN' key.
 - Press ENTER on 'Auto Testing?' Option.

11: A

11: How to learn harness.

- Connect testing board to tester.
- Mount sample harness to be learnt on board.
- Switch ON the Tester.
- Select required Cable No. & press enter.
- Press 'LRN Key' on Key Board.
- Display will be 'TEST DATA?' Press Enter.
- Display will be 'BOARD TO DATA?' Press Enter.
- Display will be 'LEARN?' Press Enter.
- Points get learnt and number of points learnt will be displayed.
- Confirm if correct numbers of points are learnt.
- Now press 'TEST'.
- Display will be REMOVE CABLE. Remove harness from board.
- Display will be PUT CABLE.

12: Less points get learn.

- Remove harness from mounting board.
- Select board check option on tester.
- Take board check for every point on board.
- There should be single point for every number.
- If some point is not showing any number then check cable.

13: One Black Square continuously blinks on Display.

- Switch off tester
- Open front plate of Tester.
- Remove 5 pin Black connector from Keyboard.
- Now switch ON the tester & check the display.
- If display is working proper then insert 5 pin Relimate as it is.
- Now switch ON the tester again & check the display.
- Remove 2 pin Relimate which comes from main CPU pcb.

Switch on tester.

14: Label data not printing after passing the harness.

- Check print label setting is On or Off for selected cable number.
- If yes, then connect another working printer with its working cable.
- If problem persists,
- Open the tester from back side.
- Check all wire connection of 25 pin 'D' printer connector.
- If problem persists, then problem is in CPU PCB.

15: Display shows 'LEARN NOT AVAILABLE' while learning the harness.

Learning is switched Off.

- Switch OFF the tester.
- Put key switch on 'learn'.
- Press LRN key on keyboard and switch ON the tester.
- One cursor will blink on display. Now release LRN key.
- Display will show some setting.
- Press ENTER on LEARN AVAILABLE? Option.

16: Label is printing after passed the harness 2 times.

- A particular mode is set; to correct
- Switch OFF the tester.
- Press UP arrow key on keyboard and switch ON the tester.
- Display will show some setting.
- Press ENTER on each Reset ****? Option. (**** is)

17: Tester get hang while testing the harness.

- Relay on fail mode is set, to correct
- Switch OFF the tester.
- Press UP arrow key on keyboard and switch ON the tester.
- Display will shows setting.
- Press ENTER on 'RELAY ON PASS'?

18: Tester gets reset or hang.

It is mainly because of absent earthing or a spike on the supply due to heavy inductive load like solenoid operation, may be stamping unit. Every stamping unit should have a snubber circuit i.e. R-C for ac solenoid and a free wheeling diode for DC solenoid.

- Switch OFF the tester.
- Remove printer or stamping unit if connected to tester.
- Check earthing of 230V AC supply at mains cord.
- Details for 230V AC voltage are given in manual.
- Open tester from front side and press all IC's and connectors.
- Connect 1 wire to tester's body & then connect another end to earthing of 230V AC supply.

HOW TO ...

1: How to transmit LBL (label) file in Tester.

- Create required label file from printer software, for required label. It is popularly called as 'prn' file. Printer supplier will help in generating this file. It is a text file that can be opened using 'notepad'.
- Take print of this file directly from P.C. to label printer. Using DOS command 'copy filename prn' or 'copy filename lpt1'. This confirms if file created is correct.
- Open this file in Notepad.
- Put #sign as starting line and as the ending line.
- Now save this file with extension (.LBL)
- Open futura interface software on P.C.
- File menu.
- Transmit/Receive LBL File.
- Select created LBL file.
- Connect P.C with Tester through futura serial cable.
- Connect Label printer to futura tester.
- Select required Cable Number & press enter.
- Go to learn menu, Test Data, LBL Data by pressing UP key.
- Display will be 'RECEIVING'.
- Transmit selected LBL file from P.C.
- Tester shows saving in memory and print will come.
- Sample LBL File.

For HTM

#

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Sample Harness

Date:@1

Time:@2

Sr.No.:@60000

Tested OK

For PHTM

#

Futura Apsol

Sample Harness

Date:@1

Time:@2

Sr.No.:@60000@6

Tested OK

#

#

2: How to transmit HRN (Harness) file in Tester.

- Open Notepad file.
- Put # sign at starting line and at the ending line.
- In between type required harness data
- Now save this file with extension (.HRN)
- Open futura interface software on P.C.
- File menu.
- Transmit/Receive HRN File.
- Select created HRN file.
- Connect P.C with Tester through futura serial cable.
- Select required Cable Number & press enter.
- Go to learn menu, Test Data, Board to Data, Data from PC press Enter.
- Display will be RECEIVING?
- Transmit selected HRN file from P.C.
- Tester shows saving in memory and display will be Command.
- Sample HRN File.

#

0008

0001 0005 0006 0008

0002 0004 0007 0010

#

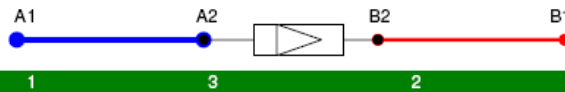
3: How to check diode in harness.

- This HTM, PHTM testers are not design for diode testing.
- But if there is single diode in harness then.
- Give lower no of point to anode of diode.
- Give higher no of point to cathode of diode.
- Refer following details.

Proposed Solution

- 1) Give point numbers as $A1 < B2 < A2 < B1$. E.g. $A1=1, A2=3, B2=2, B1=4$
- 2) Harness is to be tested in 2 stages.
- 3) Stage 1 ckt program is 1 2 3 4 for the following circuit and points as above.
- 4) Stage 2 ckt program is 2 4 only.

Diode Test Program



- 1) Circuit A (End A1 and A2) and B (End B1 and B2) are joined by a diode
- 2) There are five possible cases-

i) Diode is attached in correct direction. - OK Case.

passes harness in both stages.

ii) Diode is not connected - NG case.

Stage 1 : displays open 1 2

iii) Diode is connected in reversed direction. - NG Case.

Stage 1 : displays open 1 2

iv) Diode is connected in right direction but is a defective diode and hence conducting in both directions. - NG case.

Stage 1 : Passes harness.

Stage 2 : displays extra 3.

v) Diode is connected in right direction but is a defective diode and hence not conducting in any direction. - NG case.

Stage 1 : displays open 1 2

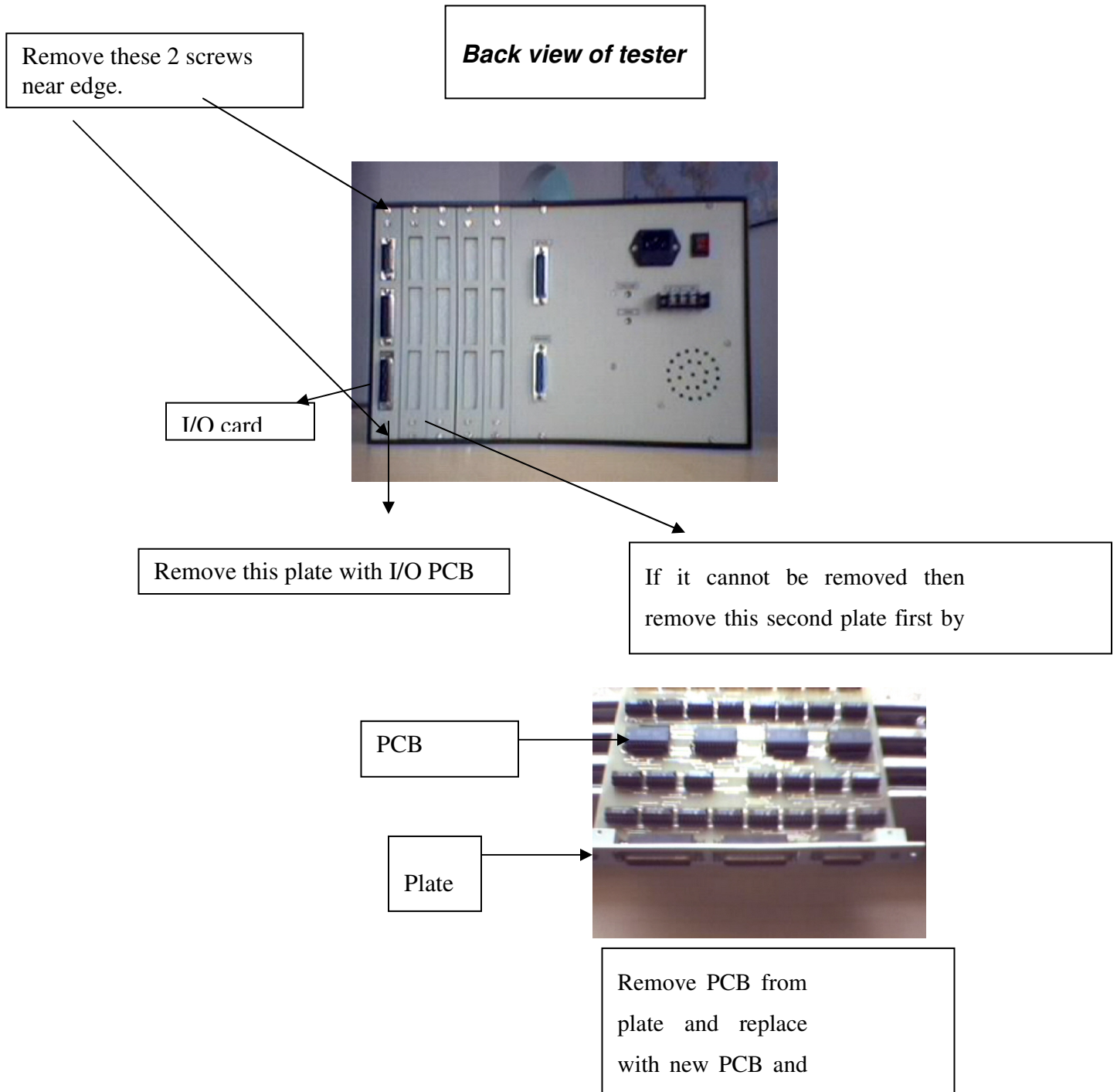
In case iv) stage 1 passes as diode conducts in correct direction.

stage 2 expects shorting in points 2 and 4 only, but since diode conducts in reverse direction also, finds 2 and 4 shorted to 1 and 3, which is an extra point in the circuit.

In case v) not conducting diode means open circuit.

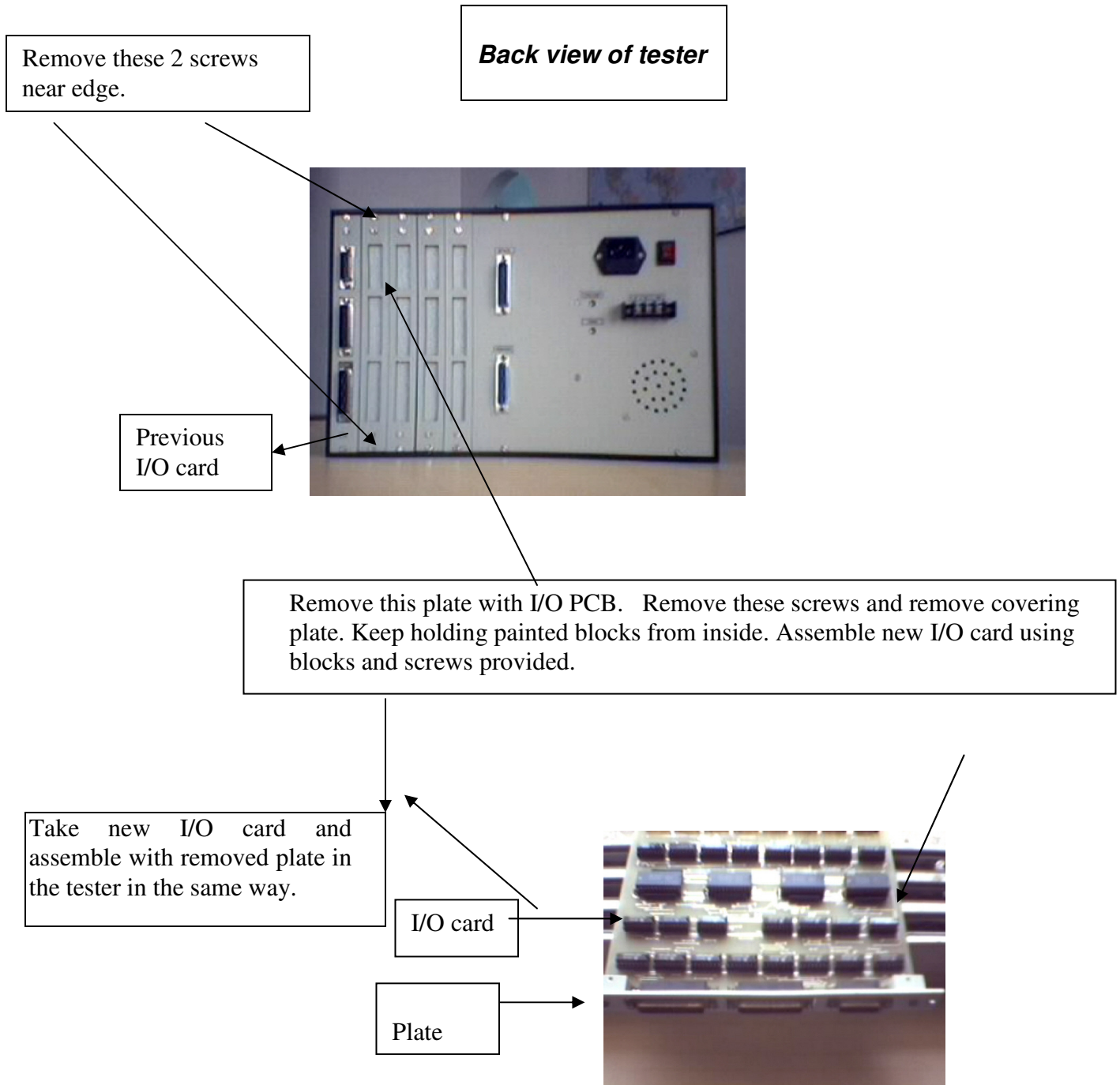
4: How to replace I/O card.

Switch off tester. Remove mains cord.



5: How to add I/O card.

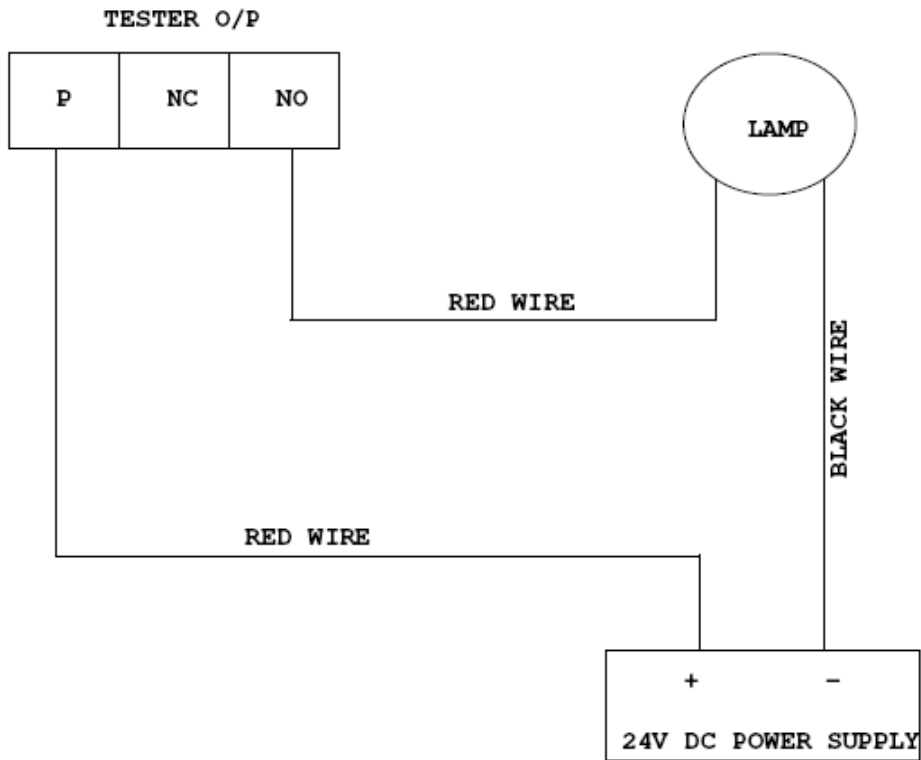
Switch off tester. Remove mains cord.



Insert card in the slot using guides provided in the tester with 15 pin connector at the top. Feel the card fitting firmly in the connector. Connect Mains cord and switch On tester. Check all I/O points with board check.

6: How to connect Bulb or Pen Marker Unit to Relay O/P.

- Refer following diagram.



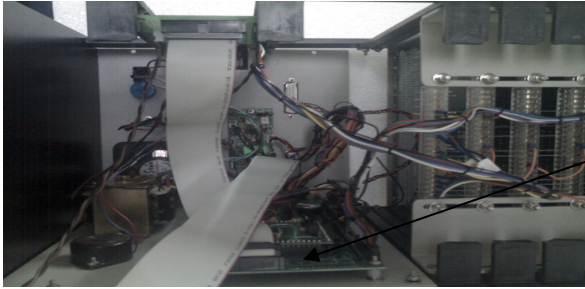
7: How to replace old HTM CPU with new PHTM CPU.

Connections Of new CPU are as follows.

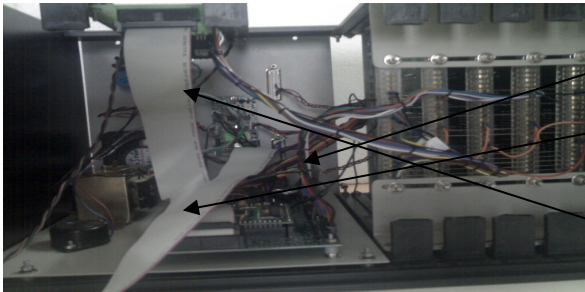
Following photos indicate internal view of PHTM CPU and all its connections.



Front view of tester.



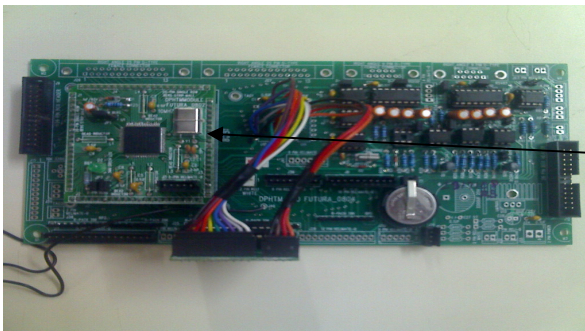
Here CPU PCB is located.



10 pin Connector from IO cards

FRC connector for Display

FRC connector from motherboard



CPU overview

Program Module of CPU

8: How to remove transformer in case of required replacing.

Refer photo. Before removing nuts, apply Thinner or Kerosene on both mounting screws/nuts.

Keep it for 10/15 min and then loose the screw and nuts.

