



## Supplier Work Instruction

Title: MDX-600 (198-000309) & MDX-P600 (198-000310) (RoHS) PCB Testing Procedure	No: SUP-W-287	Page: 1 of 10
---	------------------	------------------

Date	Rev	Changes	By	Ck.
Aug, 26 2014	1	New assembly ( new printer chip set assembly)	Kryz J.	

## MDX-600 (198-000309) & MDX-P600 (198-000310) (RoHS) PCB Testing Procedure

### Fixture Setup

1. Connect test fixture to 12 Volts DC, minimum current 2 Amps. See figure 1

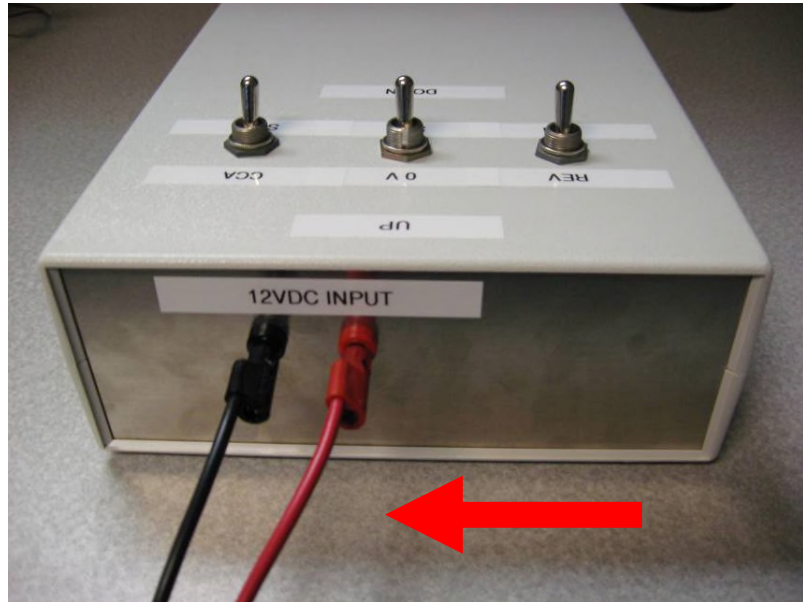


Figure 1

2. Connect PCB to internal batteries. (J8) See figure 2.  
Note: PCB will fail if not connected to 6 AA batteries. Then place PCB in housing

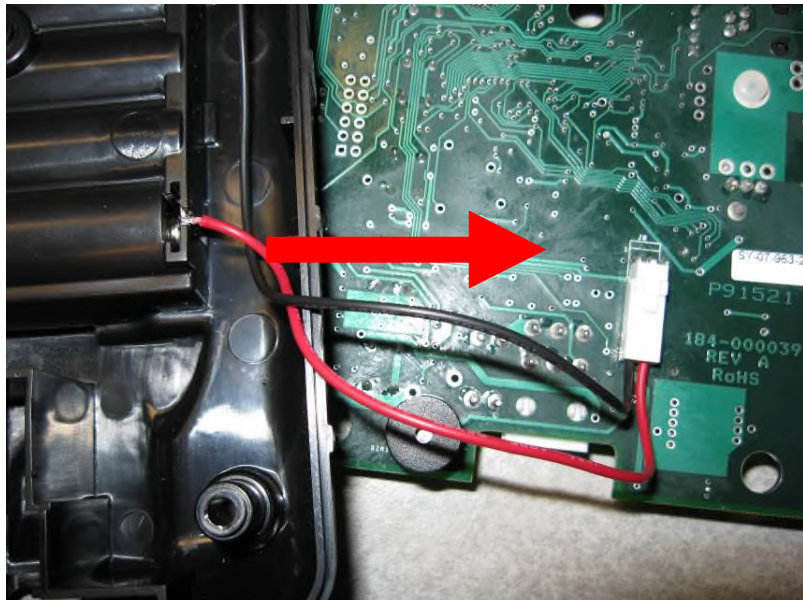


Figure 2

## MDX-600 (198-000309) & MDX-P600 (198-000310) (RoHS) PCB Testing Procedure

3. Attach display to J1 and J2. See figure 3. Set display in display holder

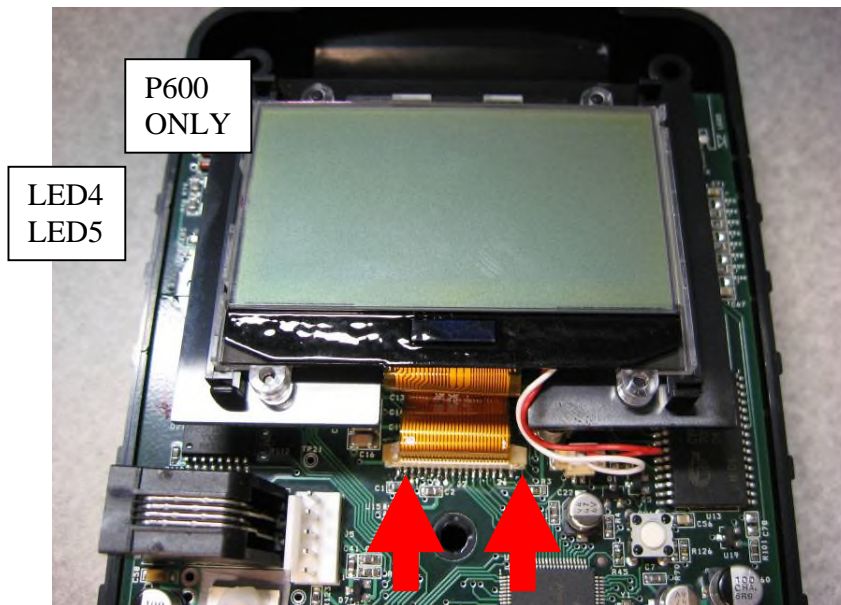


Figure 3

4. Attach Unit Under Test (UUT) to fixture and PCB. See figure 4 and 5.

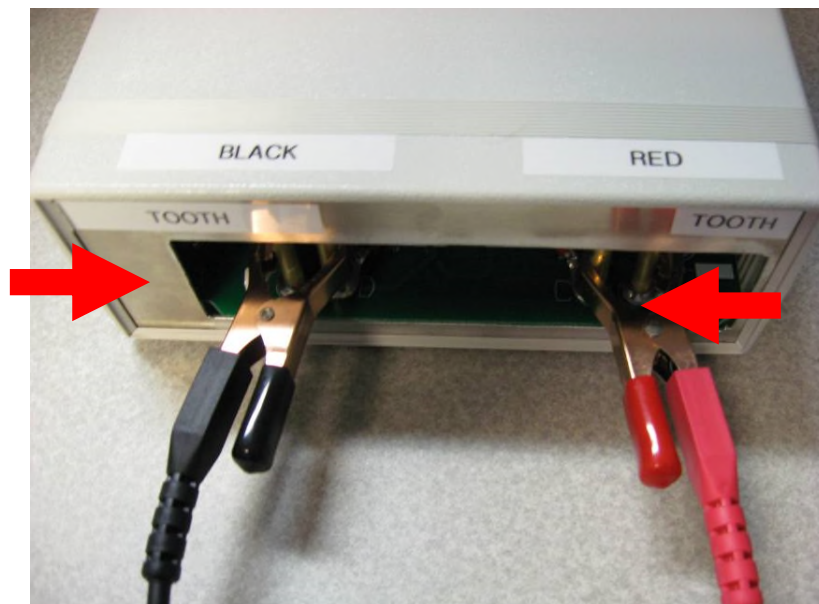


Figure 4

Note: Make sure cable tooth matches with tooth side of fixture.



Figure 5

5. Attach serial port jumper to J3. See figure 6

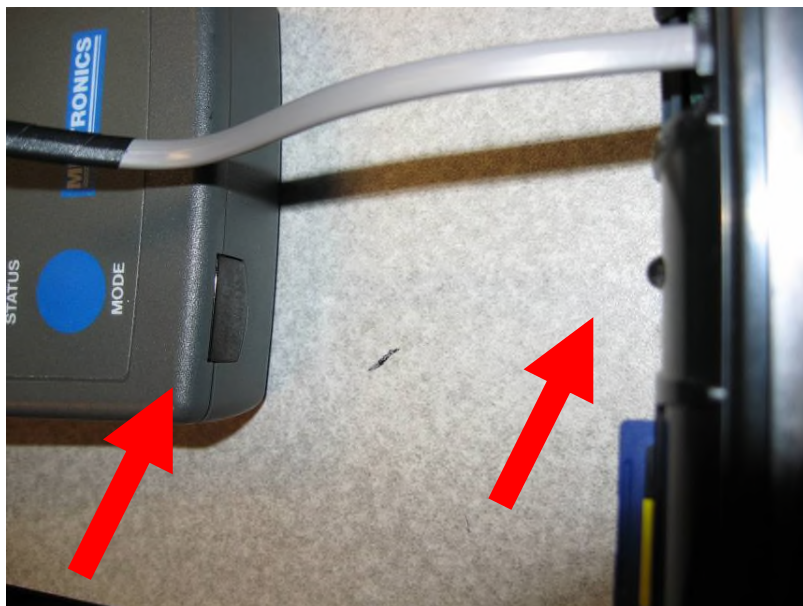


Figure 6

**UUT “Board Test” instructions**

**1. *Select “BOARD TEST”***

Press SW3

SET LCD CONTRAST

Default is “12” if contrast too light or dark adjust using SW1 “DARKER” or SW2 “LIGHTER”

Press SW3 “TO SAVE AND EXIT” this will continue to next test.

**2. *IDENTIFICATION TEST***

DOES THE BOARD

SUPPORT AN INTERNAL

PRINTER?

Press SW1 “YES” (Note: If testing **MDX-P600**)

Press SW5 “NO” (Note: If testing **MDX-600**)

**3. *KEY TEST***

PRESS AND RELEASE ALL

KEYS

Press SW1, SW2, SW3, SW4, SW5

Note: SW4 has 250mS delay, press and hold little longer.

Note: Beep will sound when switches are pressed.

**4. *LCD TEST***

THE NEXT SCREEN WILL

BE BLANK (ALL PIXELS

OFF) FOR 3 SECONDS

Press SW3 to continue (Observe)

**5. *LCD TEST***

WAS THE PREVIOUS

SCREEN BLANK (ALL

PIXELS OFF)?

Press SW1 “YES” if correct

Press SW5 “NO” if incorrect

**6. *LCD TEST***

THE NEXT SCREEN WILL

BE FILLED (ALL PIXELS

ON) FOR 3 SECONDS

Press SW3 to continue (Observe)

**7. LCD TEST**

WAS THE PREVIOUS  
SCREEN FILLED (ALL  
PIXELS ON)?

Press SW1 "YES" if correct  
Press SW5 "NO" if incorrect

**8. LCD TEST**

WITH THE NEXT KEY  
PRESS THE BACK LIGHT  
WILL BE SWITCHED OFF

Press SW3 to continue (Observe)

**9. LCD TEST**

IS THE BACK LIGHT  
OFF?

Press SW1 "YES" if correct  
Press SW5 "NO" if incorrect

**10. LCD TEST**

WITH THE NEXT KEY  
PRESS THE BACK LIGHT  
WILL BE SWITCHED ON

Press SW3 to continue (Observe)

**11. LCD TEST**

IS THE BACK LIGHT  
ON?

Press SW1 "YES" if correct  
Press SW5 "NO" if incorrect

Note: If "NO" then the UUT will send print to internal printer PCB "FAIL"  
If "YES" will continue to Sound Test

**12. SOUND TEST**

WITH THE NEXT KEY  
PRESS THERE WILL BE 3  
LONG BEEPS  
THE KEY BEEP EXCLUDED

Press SW3 to continue (Listen)

**13. SOUND TEST**

WHERE THERE 3 BEEPS?

Press SW1 "YES" if correct  
Press SW5 "NO" if incorrect



**14. RTC TEST**

THE CLOCK IS TESTED  
AUTOMATICALLY  
THE PROGRAM CONTINUES  
AFTER THE TEST HAS  
BEEN COMPLETED

**15. FLASH TEST**

THE FLASH IS TESTED  
AUTOMATICALLY  
THE PROGRAM CONTINUES  
AFTER THE TEST HAS  
BEEN COMPLETED

**16. EEPROM TEST**

THE EEPROM IS TESTED  
AUTOMATICALLY  
THE PROGRAM CONTINUES  
AFTER THE TEST HAS  
BEEN COMPLETED

**17. ADC REF TEST**

MAKE SURE ALL THE  
SWITCHES ARE IN THE  
DEFAULT DOWN POSITION  
(Observe) Press SW3 to continue

**18. ADC ZERO TEST**

MAKE SURE THE  
SWITCHES ARE IN THE  
SPECIFIED POSITION  
SW1 :DOWN SW2 :UP  
SW3 :UP  
(Set the switches to correct position on the fixture) Press SW3 to continue  
Note: PCB will fail if switches not set

**19. ADC ZERO TEST**

MAKE SURE ALL THE  
SWITCHES ARE IN THE  
DEFAULT DOWN POSITION  
(Observe) Press SW3 to continue

**20. ADC VDIFF TEST**

MAKE SURE THE  
SWITCHES ARE IN THE  
SPECIFIED POSITION  
SW1 :DOWN SW2 :DOWN  
SW3 :UP

(Set the switches to correct position on the fixture) Press SW3 to continue  
Note: PCB will fail if switches not set

**21. ADC VDIFF TEST**

THE VDIFF IS TESTED  
AUTOMATIC  
THE PROGRAM CONTINUES  
AFTER THE TEST HAS  
BEEN COMPLETED

**22. ADC VDIFF TEST**

MAKE SURE ALL THE  
SWITCHES ARE IN THE  
DEFAULT DOWN POSITION

(Set switches down) Press SW3 to continue

**23. ADC ZERO TEST**

MAKE SURE ALL THE  
SWITCHES ARE IN THE  
DEFAULT DOWN POSITION

(Set switches down) Press SW3 to continue

**24. REVERSED CONN. TEST**

MAKE SURE THE  
SWITCHES ARE IN THE  
SPECIFIED POSITION  
SW1 :UP SW2 :DOWN  
SW3 :DOWN

(Set the switches to correct position on the fixture) Press SW3 to continue  
Note: PCB will fail if switches not set

**25. ADC ZERO TEST**

MAKE SURE ALL THE  
SWITCHES ARE IN THE  
DEFAULT DOWN POSITION

(Set switches down) Press SW3 to continue

(Note: If testing **MDX-600** next test is EXTERNAL PRINTER TEST)

(Note: If testing **MDX-P600** next test is INTERNAL PRINTER TEST)



**26. INTERNAL PRINTER TEST**

DOES THE OUTPUT MATCH  
THE FOLLOWING?  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
0123456789!@#%&\*( )=

Press SW1 "YES" if correct

Press SW5 "NO" if incorrect

**27. INTERNAL PRINTER TEST**

OPEN THE COVER AND  
REMOVE THE PAPER FROM  
THE PRINTER HEAD

INTERNAL PRINTER TEST

ARE BOTH LED'S OFF?

Press SW1 "YES" if correct

Press SW5 "NO" if incorrect

Note: See figure 6 for location of LED'S

**28. INTERNAL PRINTER TEST**

INSERT THE PAPER  
AND CLOSE THE COVER

INTERNAL PRINTER TEST

ARE BOTH LED'S ON?

Press SW1 "YES" if correct

Press SW5 "NO" if incorrect

See figure 3

**29. EXTERNAL PRINTER TEST**

MAKE SURE THAT THE  
EXTERNAL PRINTER IS  
ON AND ALIGNED WITH  
THE IR OUTPUT

Note: Point IR LED towards external printer. See figure 6

Press SW3 to continue

**30. EXTERNAL PRINTER TEST**

DOES THE OUTPUT MATCH  
THE FOLLOWING?  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
0123456789!@#%&\*( )=

Press SW1 "YES" if correct

Press SW5 "NO" if incorrect

**31. SERIAL PORT TEST**

THE SERIAL PORT IS  
TESTED AUTOMATICALLY  
THE PROGRAM CONTINUES  
AFTER THE TEST HAS  
BEEN COMPLETED

**32. MMC CARD TEST**

MAKE SURE THERE IS NO  
CARD IN THE SOCKET  
Press SW3 to continue

**33. MMC CARD TEST**

PLACE AN UNPROTECTED  
CARD IN THE SOCKET  
Press SW3 to continue

**34. MMC CARD TEST**

FORMAT TEST PERFORMED  
AUTOMATICALLY

**35. MMC CARD TEST**

REMOVE THE CARD FROM  
THE SOCKET  
Press SW3 to continue

**36. PRINTING TEST RESULTS**

PLEASE WAIT

Review the printout if all “check marks” then PCB PASS  
Attach printout to PCB  
If there is an “X” then PCB FAIL (Troubleshoot and retest)