

Title: Defibrillator – Hewlett Packard	Date: October 20, 2018
P/N M1722	DISCLAIMER: THIS PROCEDURE PROVIDED "AS IS" AND WITH POSSIBLE FAULTS. USER MUST VERIFY BEFORE USE. NEITHER PROVIDER NOR WEBSITE ASSUMES ANY RESPONSIBILITY FOR ITS USE.
file = defib-HP-Codemaster	

1. General

Applies to Hewlett Packard Model “Codemaster XL” (M1722B) Defibrillator

2. Reference Documents

Service Manual HP Document M1722-91909
User Manual HP Document M1722-94980

3. Tools / Fixtures / Labels /Accessories

- ECG Simulator (may be part of line safety tester)
- Paddles – as shown in picture
- Safety Analyzer ex: Fluke 232D
- ECG Cable 6-prong, 3 leads.
- Chart Paper --- p/n 40457C/D or 50 mm equivalent
- M1781 Test Load (optional)



Note: The defibrillator automatically adjusts to the line voltage that is supplied (from 100–230 VAC ±15% at 50/60 Hz). No manual setting or adjustment is required. This procedure does not cover units with the SP02 option.



4. Basic PM Procedure

4.1. Physical Inspection – check battery age, case & cord and paddle integrity.

4.2. Turn on unit via the rotary switch. Verify defib unit turns on with battery only. No self diagnostics will be evident. Connect the three lead ECG cable to the simulator, matching colors or the other designators. Check that paper has been installed. After turn-on, connect the unit’s line cord to the safety analyzer; with line power the AC PWR and Bat Charge LED’s should illuminate.

4.3. EKG Lead Select Setup and Results

Hit the <Lead Select> button in order to display the EKG waveform.

Note: For an emergency evaluation you can monitor a patient’s ECG through the paddles when leads are not attached to the patient (from user manual).

At this point on the defib, check that the audio volume dial and the waveform size buttons work.

4.4. Recorder Check: With a readable waveform on the CRT display, press the <Record> button to start and then stop the printout.

Note: For joule delivery checking, there are three techniques that follow in order of preference and ease.

4.5. Joule Test with Paddles -- Using an External defib Test Device

If necessary set up the external tester for a low wattage pulse. On the main unit, set the power dial for 5 joules. Apply both paddles to the load test fixture, press <Charge>, and after the charging tone changes to indicate ready, press <Shock>. Note value of output shock. The reading on the simulator should be within “4% +/- 1 joule of the setting on the difib dial”. Repeat for several other settings 50, 150, 300.



4.6. Joule Test Using Built-In energy circuit.

With the paddles in their holders (Sternum on left, Apex on right), press the yellow charge button. Then press and briefly hold both Shock buttons at once, which will deliver a pulse. The recorder will print a test report.

4.7. Joule Test with dummy load P/N M1781 Test Load

Refer to Service Manual, Section “Testing the Defibrillator” Brief intro in Appendix.

4.8. Battery Capacity Check

Refer to Appendix for the complete sequence of steps. An alternate and simpler but unofficial check verifies that the device can successfully deliver three successive 300 joule charges all within 11 seconds each using battery only.

4.9. Patient Leakage Test / Line Leakage Test

If not already done, using a safety tester, connect the defib AC line cord to the tester.

* Line leakage with ground open is typically 150uA, 200 max.

* The “all patient leads to ground” leakage is typically 3uA, 10uA max.

APPENDIX

Setup and Diagnostic Menu Tests

To access the setup/diagnostic menu tests, turn the Energy Select control to Monitor On, while pressing the <Sync> and <HR Alarm> keys. The monitor display will list 13 individual tests.

For example, use the <ECG Size> up and down arrows to select “TEST DEFIB”. Then hit <Lead Select>. Further info for this is on p 3-13 of the service manual, but not recommended unless absolutely needed.

Battery Capacity Check (from Service Manual)

This can take several hours and deemed not suitable for low-resource locations.