

Hercules User Interface/Bezel Assembly Functional Test Procedure
PCA 1261317
Revision 3

REV INFO	INITIALS	DATE	NOTES
Rev 1	SHB	2021-12-08	1. Document creation
Rev 2	SHB	2022-03-28	1. Update Part Number to 1261317
Rev 3	BAP	2023-08-31	1. Update Modem acceptance criteria

This document is intended as a continuation of the Functional Test Procedure for PCA 1261318. Please refer to the Setup and Test Sequence in that document first.

Note: Either the Accelerometer or the IMU will be installed, not both.

Board Revision Check:

1. From the main menu, select the “Read Revision Numbers” menu item.
2. The menu should read TELEM_REV_BIT0 through TELEM_REV_BIT3, BOARD REVISION BIT 0 through BOARD REVISION BIT 3, machine app version and bootloader version. The Telemetry board revision shall match the revision number listed in the released drawing of 1261319.

```

Read Revision Numbers
Telemetry board revision: 0001
UI board revision:      0010
Machine app revision:   1.2.0.227
Bootloader revision:   U-Boot 2018.11-rc3 (Feb 27 2020 - 22:14:15 +0000)
-----
1) Go back to Main Menu
  
```

Bootloader, UI board, and Machine App revisions may differ.

3. Board Revision Check complete. Select the “Go back to Main Menu” menu item.

Accelerometer Check:

1. From the main menu, select the “Read Accelerometer” menu item by typing the menu number and pressing return. The menu should appear as follows:

```
Read Accelerometer
<-0.234612, 0.153216, -9.68134>
-----
1) Go back to Main Menu
Select option: 
```

The board orientation will appear as “<x, y, z>”. Positive X axis is pointing left when looking at the LCD. Positive Y axis is pointing to bottom of screen. Positive Z axis is normal to board plane with positive direction pointing out of the screen. Units are in m/s². In the above output, assembly is laying flat on a level table with the LCD side down.

2. If the Accelerometer is not installed, there will be no “<x, y, z>” output:

```
Read Accelerometer
-----
1) Go back to Main Menu
Select option: █
```

3. Accelerometer Check complete. Select the “Go back to Main Menu” menu item.

IMU Check:

1. From the main menu, select the “Read IMU” menu item.

2. The menu should read “IMU Detected” if installed, or “IMU Not Present” if not installed. Below is sample output.

```
Read IMU
IMU Detected
-----
1) Go back to Main Menu
Select option: █
```

3. IMU Check complete. Select the “Go back to Main Menu” menu item.

Cellular Modem Check:

1. From the main menu, select the “Test Cellular Modem” menu item.

2. The menu should read, “Modem responds: OK” OR “Modem responds: APP RDY”. Below is sample output.

```
Test Cellular Modem
Modem responds:
OK
-----
1) Go back to Main Menu
Select option: 
```

3. Cellular Modem Check complete. Select the “Go back to Main Menu” menu item.

Wifi Modem Check:

1. From the main menu, select the “Test Wifi Modem” menu item.

2. The menu should read, “Wifi responds: OK”. Below is sample output.

```
Test Wifi Modem
Wifi responds: OK
-----
1) Go back to Main Menu
Select option: 
```

3. Wifi Modem Check complete. Select the “Go back to Main Menu” menu item.

END OF TEST.