

Reply to an OET Inquiry Response

Currently Displaying Inquiry Tracking Number: **486680**

Inquiry Details on 06/01/2022:

First category: RF Exposure *
Second category: SAR (RF Exposure)
Third category:
Subject: SAR Test Setup for Smart Cane
Inquiry: Hello,

We are working with a manufacturer of a smart cane device to perform SAR Testing on their product for certification. The handle of the cane contains the LTE/BLE radios, antennas and power supply. There is an adjustable aluminum shaft 30-40" long and at the bottom of the cane are load sensors with leads connected to the handle.

Due to the length of the cane, it is not possible to test the top side of the handle underneath the SAR phantom with the cane attached. The manufacturer has indicated the aluminum shaft may be disconnected so the handle can be tested underneath the phantom. Would this be permissible for certification? Alternatively we can test the top side of the cane with the shaft attached but rotated at an angle to fit underneath the phantom.

We have attached a cross section of the smart cane along with general information.

Thank you.

---Reply from Customer on 06/07/2022---

Hello, the Applicant would like to inquire if there is any update on this inquiry.

They have also proposed the following two additional options to fit the cane underneath the SAR phantom:

- Remove the lower shaft (half) of the cane and keep the upper shaft connected to the handle
- Cut the upper and lower shafts to remove a middle section of the cane and reassemble the cane back to resemble the production cane.

Please advise if any of the new or original options would be acceptable for testing.

Thank you.

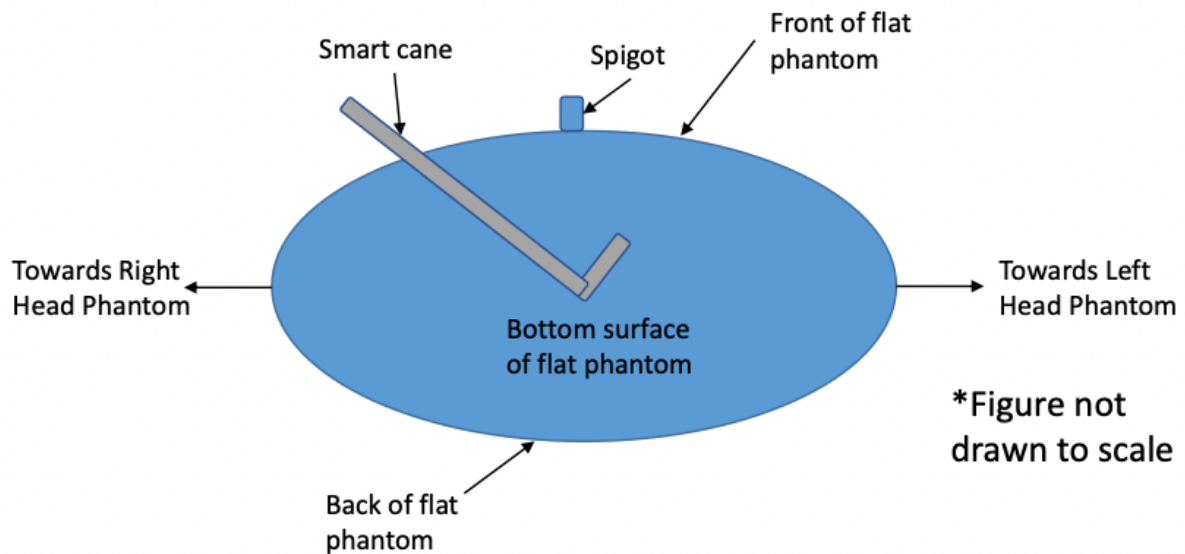
FCC Response on 06/10/2022:

Thank you for your inquiry. This device will require both 1-g Body SAR and 10-g Extremity SAR. The 1-g Body SAR tests are to address the exposure condition when the sides of the handle/upper shaft are very close/touch the users upper thigh. Both the right and left sides of the cane should be tested for 1-g Body SAR at 0 mm test separation distance (touching) from the flat phantom filled with Body Tissue Simulating Liquid. The antenna should be centered in the center of the bottom surface of the flat phantom. See the attached document, "Testing Positions for Smart Cane 01" for testing position details. **These tests should be done before any modifications are made to the smart cane, i.e. before the 10-g Extremity SAR test.** After the 1-g Body SAR tests have been completed, you should test the top surface of the handle for 10-g Extremity SAR. This can be done by disconnecting the shaft from the handle as you have proposed. However, please ensure all electrical connections between the handle and the bottom of the smart cane are still connected. The test should be done with the minimum bend in the shaft. This means the device will be positioned towards the front of the flat phantom. However, this may make it difficult to capture the hotspot. There will be a balancing between minimizing the bend in the shaft and making sure the hotspot is fully captured. See the attached document, "Testing Positions for Smart Cane 01" for testing position details. Please ignore the "Testing Positions for Smart Cane" attachment. This was uploaded in error. Please use the 01 version.

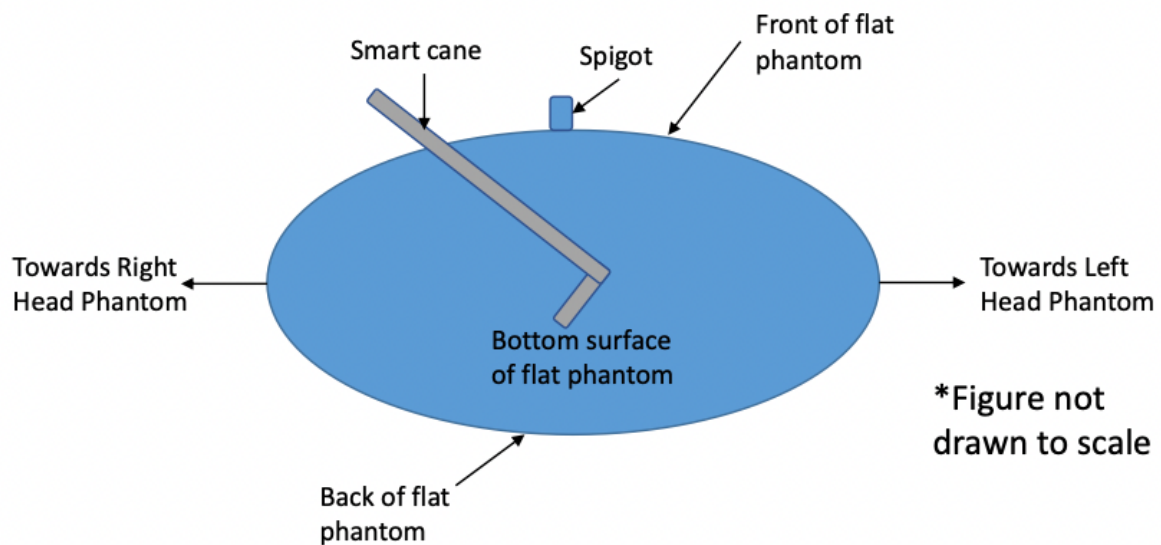
Attachment List:

[Testing Positions for Smart Cane](#)
[Testing Positions for Smart Cane 01](#)

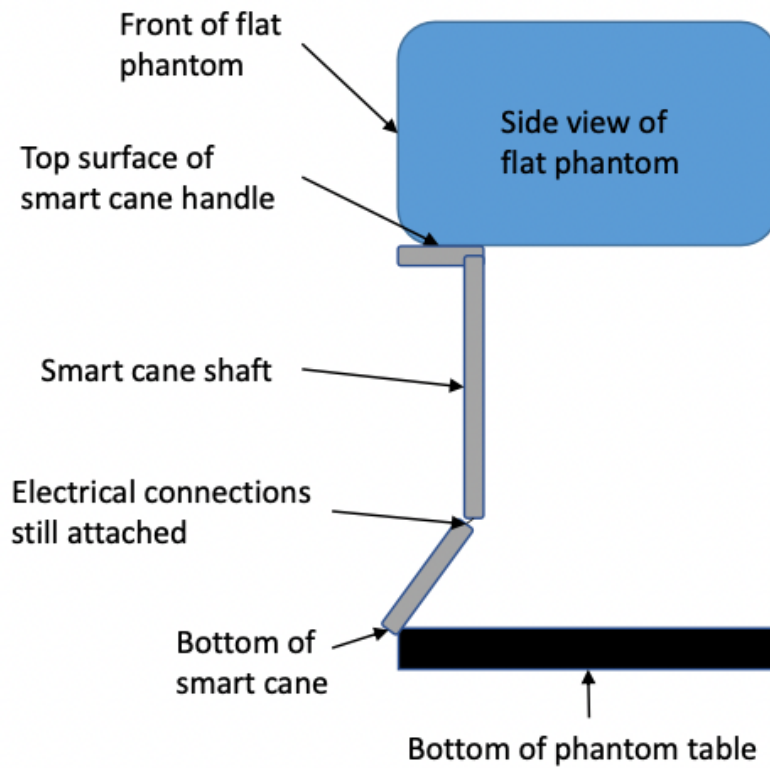
Testing position for right side of smart cane



Testing position for left side of smart cane



Testing position for top surface of smart cane handle



*Figure not
drawn to scale