

DSI™

# Power On Detector (POD2) User Guide



This user guide will explain the features and operation of the PhysioTel™ Digital Power On Detector (POD2).

The POD2 is a handheld device which can be used to determine if a PhysioTel Digital implant has successfully turned on following a magnet swipe while displaying critical information about the implant. The POD2 has two operational modes: Implant Detection and Interference Assessment.

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# Table of Contents

Battery Replacement and Turning On and Off .....	1
Implant Detection Mode .....	1
Interference Assessment Mode .....	3
Specifications .....	4
Appendix .....	5



## BATTERY REPLACEMENT AND TURNING ON AND OFF

The POD2 requires two standard AA 1.5V alkaline batteries. Before first use, open the battery compartment and install two AA batteries in the indicated “+” and “-” polarity.

**TURNING ON:** To turn on the POD2, press and release the On/Off button on the front face. Upon powering up the LCD screen will display the device name, firmware version, region and battery voltage and status for 4 seconds. If the battery voltage is below 2.4V the POD2 will indicate low battery. See Specifications section for more detailed battery information.

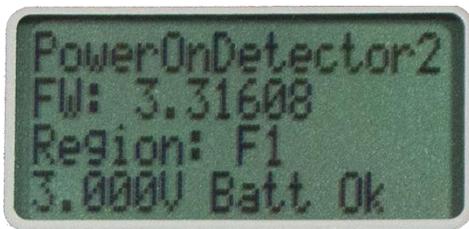


Figure 1 - POD2 Initial Power On Display

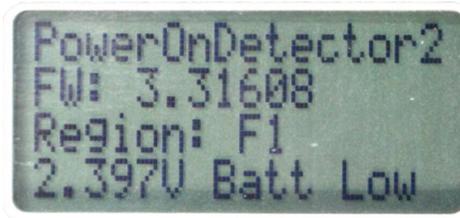


Figure 2 - POD2 Low Battery Status

After 4 seconds the screen will show four lines of dashes (---), which indicates that the POD2 is in the default implant detection mode.

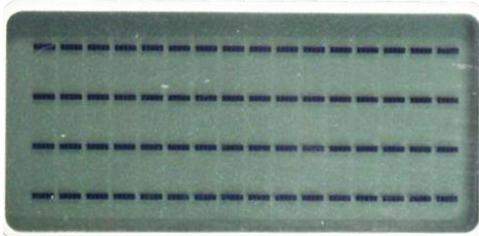


Figure 3 - POD2 Implant Detection Mode

**TURNING OFF:** To turn off the POD2 at any time press and release the On/Off button. The POD2 will shut down and screen will go blank. If POD2 is left on it will automatically power down after 2 hours of non-use.

## IMPLANT DETECTION MODE

The default mode of the POD2 is to detect when a PhysioTel Digital implant has been powered on. When an implant is powered on using the standard procedure of holding a magnet over the implant for 1-2 seconds, it emits a short transmission on a separate frequency known as a chirp. When the POD2 receives a chirp from an implant it emits an audible tone, vibrates, the blue LED on the end

illuminates and the received implant information is displayed on the LCD screen. This feedback indicates that the magnet swipe was successful, and the implant has turned on.

The chirp transmission from a PhysioTel Digital implant contains the following fields which are displayed on the POD2 screen, in order:

**Assigned implant ID**

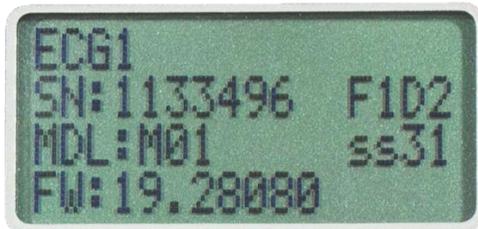
**Implant Serial Number (SN)**

**Implant Model (MDL)**

**Implant Firmware version (FW)**

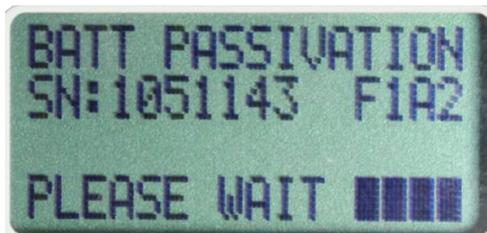
**Implant Region and Frequency**

**Received Signal Strength value (ss)**



**Figure 4 - POD2 after Successful Implant Detection**

If the implant is experiencing battery passivation, causing the implant to reset until the passivation burns off, the POD2 will detect multiple resets and display 'Batt Passivation' on the screen. For more information on battery passivation, please see the [technical note](#) on the DSI Support Center.



**Figure 5 - POD2 Battery Passivation Detection**

Implant information will remain on the screen until another implant is powered on, the POD2 is powered off using the On/Off button or the POD2 is left unused for greater than 2 hours.

*Note: Implants with firmware prior to v18 will not contain information from all fields and unsupported fields will be indicated by (\*\*\*) on the POD2 screen. If the chirp transmission is received in error due to range (implant too close or too far from POD2) or interference the LCD will display (???) in the fields that are in error. Available display features by implant firmware version are provided in the Specifications section.*

*At this time, the POD2 will only indicate if a magnet swipe was successful and an implant has turned on. It cannot be used to determine if an implant is already on.*

# INTERFERENCE ASSESSMENT MODE

The second mode of the POD2 is to assess interference on all PhysioTel Digital implant frequencies. To enable Interference Assessment mode, make sure the POD2 is powered on and hold down the On/Off button for 5 seconds. POD2 display will change to show PTD frequencies for the region on the top row and a bar graph below. Each frequency is scanned for 1.1 seconds.

The display will show a numeric RSSI (Received Signal Strength) value under the frequency ID label for the frequency that is currently being scanned. As the next scan progresses, the previous RSSI value is displayed as a graphic bar. Assessment mode will continue to cycle through the frequencies until the POD2 is powered down using the On/Off button, switched back to Implant Detection Mode by holding the On/Off button for 5 seconds or POD2 is unused for greater than 2 hours.

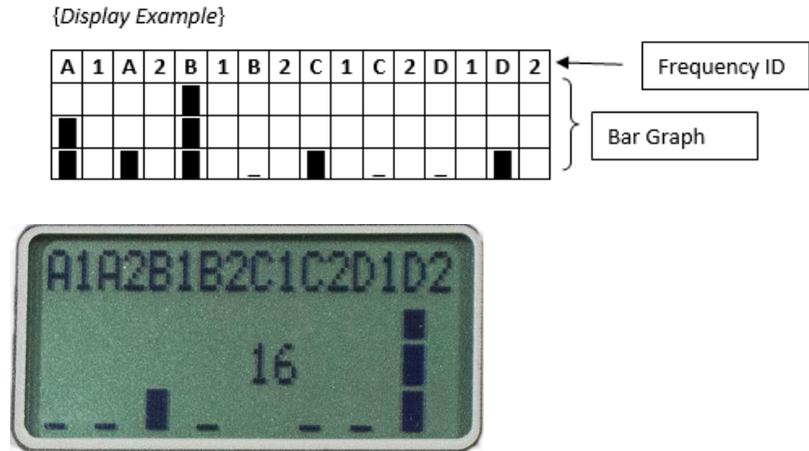


Figure 6 - POD2 On Screen Assessment Plot

# SPECIFICATIONS



POD2 Specifications	
<b>Dimensions</b>	140mm L, 80mm W, and 35mm H (thickness)
<b>Power Requirements</b>	2 AA Size Batteries (2000 mAH), 1.5V only
<b>Battery Life – Implant Detection Mode</b>	Approximately 20 days
<b>Battery Life – RF Assessment Mode</b>	Approximately 13 days
<b>Battery Low Alarm</b>	Less than 2.4V
<b>Response to Implant Detection</b>	3 second vibrate, LED and audible tone
<b>RJ45 Jack</b>	Used for POD2 firmware update
<b>Detection Range - Implanted</b>	0m to 3m
<b>Detection Range - Not Implanted</b>	30cm to >5m

Implant Compatibility: The following table provides details on the available functionality based on the implant firmware version.

Features Available	Implant Firmware Version & Release Date				
	1.38049 5/14/14	1.50030 8/25/15	15.9886 7/01/18	18.18214 6/11/19	>19.28080
Implant Serial Number	X	X	X	X	X
Current Frequency ID		X	X	X	X
Firmware Version		X	X	X	X
Implant ID			X	X	X
Implant Model				X	X
Europe(F2) Implant Compatible (No Passivation Detection)				X	
Europe (F2) Implant Compatible with Passivation Detection					X

## APPENDIX

PhysioTel Digital frequencies are designated by four alpha-numeric characters F#1 – X#2 (F#1 = region, X = frequency, #2 = group). The following table outlines the currently available Frequencies and Groups by Region:

North America	Europe	Japan	China
F1-A1	F2-A1	F3-A1	F4-A1
F1-B1	F2-B1	F3-B1	F4-B1
F1-C1	F2-C1		F4-C1
F1-D1			
F1-A2	F2-A2	F3-A2	F4-A2
F1-B2	F2-B2		F4-B2
F1-C2			
F1-D2			