



The Qi FOD Transmitter is a V1.1 power transmitter that can be used to test the operation and performance of Qi V1.1 power receiver devices. A USB serial interface is used to display operating information and to program transmitted power offsets as well as change the operating modes.

For a quotation or for technical inquiries please contact:
wirelesspower@avid-tech.com

Visit AVID's wireless power forum:
www.avid-tech.com/wirelesspower

Specifications
Subject to Change

APPLICATION

Product developers looking to quickly characterize and debug Qi V1.1 wireless power receiver functionality and foreign object detection (FOD) performance. The FOD Transmitter accurately measures and reports transmitted power (PPT) values. It is useful for V1.1 design debugging, characterization, Qi pre-compliance testing, and production testing.

FEATURES

- Fully functional Qi V1.1 Transmitter
- Stand alone, easy to use device in plastic frame
- +19VDC power input (DC supply included)
- LEDs for device status
- USB/serial port for displaying PPT, PPR, Ploss, and other parameters
- Uses same coil as FOD test transmitter TPT#2 specified by WPC
- Factory calibrated and characterized using AudioDev Calibrator
- Accurately measures and reports PPT to meet WPC requirements
- Decodes standard 8-bit WPC received power (PPR) packets
- Decodes high res 16-bit received power packets sent by AVID Qi Receiver Simulator V1.1 and AVID FOD Receiver devices
- Programmable PPT offset and FOD threshold values (serial commands)
- Open loop (fixed frequency) mode for characterizing receivers and for checking TX accuracy using the AudioDev calibrator
- Position mode (ping loop) for easy center alignment of receivers

TEST MODES

- Standard Qi V1.1 compatible transmitter
- Open loop mode (fixed frequency operation)
- Position Mode (ping loop for using signal strength to center RX)

PPT OFFSET AND FOD THRESHOLD

- Selectable PPT offset (+/-1000mW max, 1.0mW steps)
- Selectable FOD trip threshold (0 to 30000mW, 1.0mW steps)
- Enable or Disable transmitter shutdown after trip events or timeout



The Qi FOD Receiver is a power receiver that can be placed on Qi wireless transmitters and used to test the operation and FOD performance. DIP switches on top of the FOD Receiver are used to program received power offsets and to change internal loads.

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APPLICATION

Product developers looking to quickly characterize and debug Qi V1.1 wireless power transmitter functionality and foreign object detection (FOD) performance. The FOD Receiver accurately measures received power (PPR) and sends the WPC specified V1.1 packets to the transmitter. It is useful for V1.1 design debugging, characterization, Qi pre-compliance testing and production testing.

FEATURES

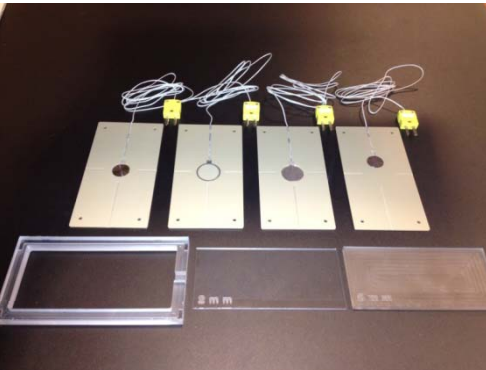
- Fully functional Qi V1.1 Receiver
- Stand alone, easy to use device in rugged enclosure
- +5VDC output
- LEDs for device status
- Test points for bridge voltage and digital comm. data
- Uses same coil as FOD test receiver TPR#5 specified by WPC. Coil is mounted in external frame to minimize parasitic losses.
- Factory calibrated and characterized using AVID FOD Transmitter
- Selectable (PPR) offsets up to +/- 630mW in 5.0mW or 10.0mW steps
- Accurately measures and reports PPR per WPC V1.1 spec
- Reports proprietary 16 bit high resolution PPR values in addition to the WPC required 8-bit packets
- Selectable internal loads up to 2.0W in 0.25W steps
- Screw terminals for connecting external loads up to 5.0W
- External load board (included) has min, max, and in between loads for testing and characterizing transmitter FOD performance

TEST MODES

- Standard Qi V1.1 compatible receiver
- Can emulate WPC TPR#5 or TPR#6 using different PPR offset values

PPR OFFSETS AND LOADS

- Selectable PPR offset step (-5.0mW, -10.0mW, +5.0mW, or +10.0mW)
- Selectable PPR offset multiplier (0 to 63)
- Selectable 0.0W to 2.0W internal loads in 0.25W steps
- External loads up to 5.0W can be connected (internal load disabled)



The Qi Foreign Objects are WPC defined metal objects that can be placed between Qi wireless transmitters and receivers and used to evaluate the FOD operation and performance.

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APPLICATION

Product developers looking to quickly characterize and debug Qi V1.1 wireless power transmitter and receiver foreign object detection (FOD) functionality. WPC specified foreign objects with attached thermocouples are used to monitor temperature rise at the interface surface per WPC requirements. These objects are useful for V1.1 design debugging, characterization, and Qi pre-compliance testing.

FEATURES

- Set of four foreign objects specified by WPC V1.1
 - Steel disc centered
 - Aluminum ring centered
 - Aluminum foil centered
 - Steel disc offset
- Objects are mounted in PEEK high temp plastic frames
- Objects include K-type thermocouples and connectors
- 2.0mm and 5.0mm spacers included for Qi pre-compliance testing
- Alignment fixture included for center aligning TPR#5 coil holder and AVID's FOD Receiver coil holder

TEST MODES

- Can be used to run WPC thermal compliance tests for FOD
- Can be used to help characterize and adjust FOD detection algorithms and thresholds for V1.1 transmitters