Wireless RF Test Enclosures

JRE STA-1 Hand Held Shielding Test Analyzer

Hand held spectrum analyzer configured for RF Isolation testing

- **Easily check and verify proper isolation of RF shielded test enclosures**
- **All settings preconfigured, nothing to adjust or set, tuned to 2.45 GHz**
- **Sensitivity down to -115 dBm easily pinpoints the tiniest leakage**
- **Li-Ion battery powered**
- **Includes directional Yagi antenna**
- **Small directional Yagi antenna to pinpoint any leakage**
- **Rivals performance of multi $10K spectrum analyzers at low cost**

Verify proper shielding isolation of your entire test set up using this handy sensitive spectrum analyzer. Matching the frequency of the JRE HPSS-1 Test Signal Source of 2.45 GHz, operation is simple - just turn it on.

The STA-1 is factory configured to a center frequency of 2.45 GHz, span of 2 MHz and a dynamic range on-screen of 115 dB. The RF signal from the HPSS-1 is displayed on the LCD screen along with amplitude level, simply close the enclosure and use the Yagi antenna to 'sniff' around your test set up to see any RF leakage. See our video tutorial on measuring the isolation of an RF Shielded Test Enclosure here: http://www.youtube.com/watch?v=xaGEbkT-kB8

Let's take a look at how we calibrate this system and how to do the actual test. The transmitter signal source can be any radiating RF source, ideally a high power source such as the JRE HPSS-1, as this will allow the greatest dynamic range in measurement. The JRE HPSS-1 Test Signal Source is a synthesized high power source at 2.45 GHz - matching the STA-1. This frequency is a good match for antenna size, RF power generation and ease of measurement with lower cost spectrum analyzers. Both the signal source and STA-1 hand held spectrum analyzer are switched on and you will see its signal pip on the analyzer's screen. Hold the Yagi antenna close to the signal source's antenna and note that the signal pip goes all the way up to the top of the analyzer's screen. The top of the screen is the high level water mark, as you move the antenna away, you will see the signal drop off, just like you would expect (just like driving further away from the local radio station or moving farther away from the street light. Power drops off as we move away!)

Now that we have seen the signal pip on the analyzer with the source on, place the source inside the enclosure and slowly close the door. Notice the signal getting weaker and weaker until it is way down on your spectrum analyzer screen. You are able to see down to -115 dBm, and the enclosure without any I/O cables is spec'd at -95 dB isolation, so the pip you will see will be in that general range -90 to 100 dB. So, we can see that the enclosure has the proper degree of isolation and this is with the antenna mere centimeters from the enclosure - factor in the 20 dB minimum path loss of 2.45 GHz at a meter distant and you end up with an isolation figure of 100 to 110 dB.

FEATURES & BENEFITS

- 115 dB of dynamic range, easily tracks down any leakage
- Simple operation, nothing to misinterpret due to wrong settings
- Directional Yagi pinpoints areas of concern
- Long lasting rechargeable Li-Ion battery
- Synthesized, no drifting or adjustments

Included: Universal wall adapter/charger, Yagi antenna
Dimensions: 4.5" H x 3" W x 1" D 115 x 75 x 25 mm

The HPSS-1 is part of the TVK Test Verification Kit

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