

**Technology Title:** Dual Channel Downconverter for Pulsed Radio Frequency Measurements

**Contact information:**

Naval Surface Warfare Center  
Technology Engagement Office/ORTA  
NSWC Crane Division  
Code QXN, Building 3395  
300 Highway 361, Bldg. 3395 Crane, IN 47522  
P: 812.854.8844 F: 812.854.4041

John Dement  
Ph: 812-854-4164  
john.dement@navy.mil  
Crane\_CTO@navy.mil  
<http://www.crane.navy.mil/>

**SYSCOM:** NAVSEA

**TRL:** 9

**Image:**



**ABSTRACT**

**Abstract #:** Microwave, RF, Radar, testing, telecommunications, downconverter, frequency measurements, signal analysis

The Dual Channel Receiver (DCR) is a patented cost effective way of converting RF & microwave (MW) signals into a lower frequency that can be used to make high quality, accurate and repeatable RF/MW measurements on 2 port devices. The DCR provides initial and recurring cost savings as it replaces the complex network of devices currently used to fully characterizing RF/MW components in-system with a single instrument. It can be used in conjunction with other test equipment or as a deployable “one stop box” for a multitude of spectral and time domain measurements. Currently used for a variety of test applications in support of the Navy’s Radar and EW microwave tube test systems, relationships are sought to exploit the tool’s use in other application areas. [NSWC Crane]

**THUMBNAIL**

This patented Dual Channel Receiver makes high quality, accurate and repeatable RF/MW measurements on 2 port devices. It provides significant costs savings as it replaces the use of several devices to characterize RF/MW components in-system with a single instrument.