



# PROTECTED SATCOM

Monitor, Detection and Eliminate Interference

## Abstract

Radio frequency interference is a major problem in the satellite communication industry. Bascom Hunter's Quick Universal Interference Elimination Technology (QUIET) allows for the rapid removal of in-band interference from satellite communication links. QUIET removes interference caused by either RF congestion or intentional jamming, which allows for greater network capacity and improved reliability.

Jun 11, 2015

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# Protected SATCOM

## Challenges

Radio frequency interference (RFI) is a major problem in the satellite communication industry, an industry where sources of interference can vary greatly and change rapidly. Importantly, RFI can cause the failure of communication links, the reduction of operational bandwidth, and higher data transmission costs. Traditional approaches to addressing RFI in satellite communication systems are limited to monitoring, detecting and geolocating interference; and removing the RFI requires the assistance of an interferer, which can only be done if it is known and cooperative.



## Solution

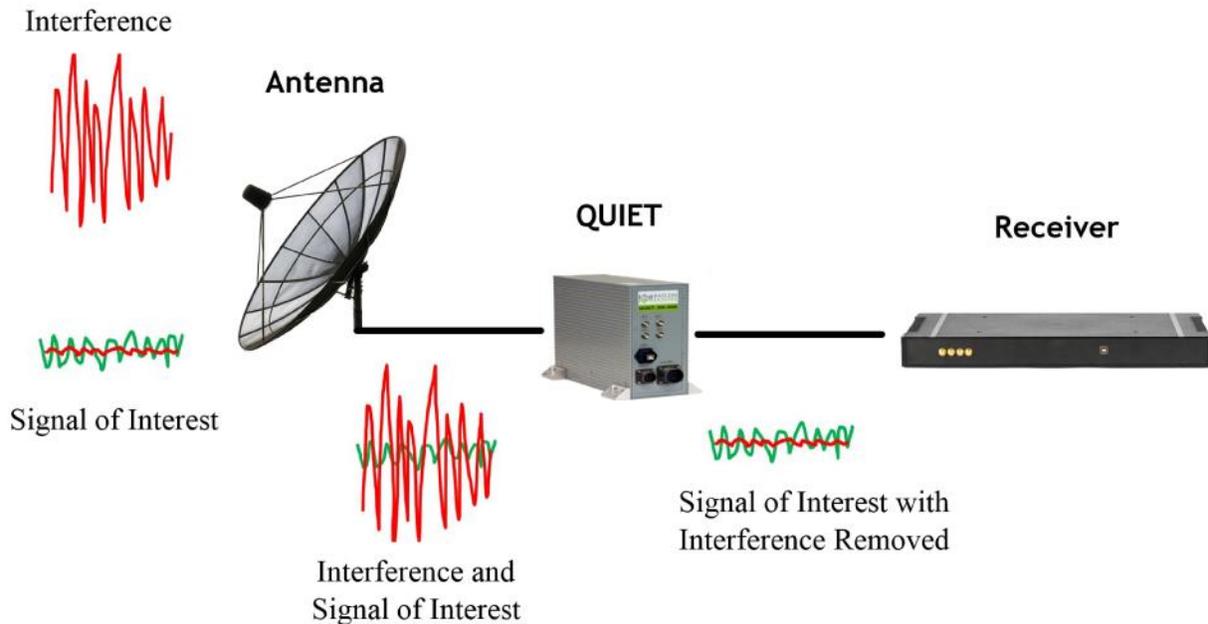
Bascom Hunter's Quick Universal Interference Elimination Technology (QUIET) allows for the rapid removal of in-band interference from wireless communication networks. QUIET removes interference caused by either RF congestion or intentional jamming, which allows for higher wireless network capacity and improved wireless network reliability. QUIET is a small "plug-and-play" box that can be inserted into existing communication systems, and requires only minor changes to existing communications system architecture. Due of this, QUIET empowers SATCOM users with a cost-effective solution that cancels RFI in real-time.

QUIET bridges the gap between monitoring and eliminating interference by using a combination of advanced cancellation algorithms as well as active interference cancellation techniques that remove RFI while protecting the integrity of the protected link. The protected link is the output from the QUIET system (minus any RFI), which is passed onto the existing customer hardware for normal processing. This approach allows customers to enhance their equipment's response to RFI while optimizing their investment in legacy equipment. QUIET provides a level of automatic interference protection to high priority carriers, both unmodulated (CW) and modulated interferers, and requires receive site equipment only.



QUIET is installed directly into the communications chain with minimal impact to the latency of the existing communications signal. Furthermore, QUIET does not require any

additional bandwidth to operate, which results in no impact on operations while preserving current infrastructure investments. Also, QUIET utilizes blind separation on the receiving side of the communications, meaning that no additional equipment is required on the transmitting side. Moreover, QUIET works with point-to-point applications, point-to-multi-point applications, crossbeam applications, and with all existing and new satellites.



QUIET provides the highest level of automatic interference protection for high priority carriers and works for most types and causes of interference, including modulated (SCPC) and unmodulated (CW and sweeping CW signals) RFI.

## About Bascom Hunter

Over the last five years, the amount of data sent wirelessly has increased tenfold. The result is a dramatic increase in demand for wireless bandwidth, which has seen exponential growth with no foreseeable slowdown. The finite resource of available radio frequency spectrum, however, is plagued by unreliable coverage and signal interference so much so that today's solutions simply will not meet tomorrow's demand. Bascom Hunter's mission is to enable customers to get the most out of the RF technology revolution. We provide the leading solutions to wireless communication and security at competitive prices. Contact us today to learn how our products can help address coverage problems and take full advantage of any wireless technology.

**Contact Bascom Hunter**

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