

# Gryphon200 Data Link Test Set

PCM

RF

FM

**Data Link  
Analyzers**

Custom  
Telemetry  
Solutions

Contains:

Full PCM Simulator

Bit Error Rate Tester

Eb/N0 Analog Noise Module

Link Latency Tester

*Application  
Note*

Every telemetry station needs to be working 110% when the mission is on the line. The best way to make sure you will get your data is to test your station before every mission. The Gryphon200 gives the Telemetry user the optimum test tool for verifying the ground station performance.

The Gryphon200 goes beyond the standard Bit Error Rate Tester with tests developed directly for the Telemetry user. Being able to use IRIG P/N patterns to test is a standard, but the Gryphon200 allows the user to go further using and customizing a fixed major frame simulator. Being able to sum calibrated white Gaussian noise onto a data stream gives a true Eb/N0 Bit Error Rate performance test of any ground station.



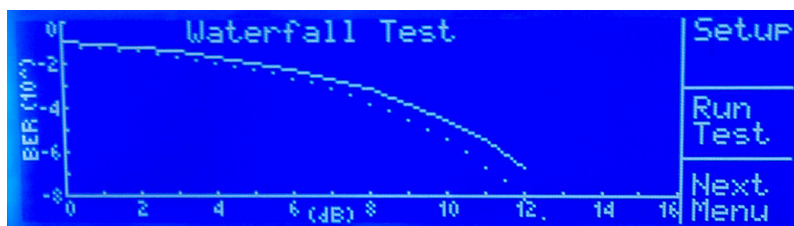
The automated Waterfall Test will step the noise level through a user defined range giving an accurate Eb/N0 waterfall plot quickly and easily. Other data distortion tests meant to stress each of a Bit Syncs possible failure points include: Jitter, Doppler Shift and Blanking.

## Bit Error Rate Tester

Custom distortion tests including Jitter, Doppler and Blanking come standard with this product. Jitter test will modulate the data stream with a user specified FM jitter frequency to test the phase rejection of the phase lock loop of a Bit Sync. Doppler testing will step through a user defined bit rate Range to test the tracking range of a Bit Sync phase lock loop. The Blanking tester allows the user to insert a defined number of zeros into a data stream which test the Auto Gain Control's ability to lock on period of no bit transitions as well as how the phase lock loop holds.

The number of bits it takes for a Bit Sync to recover clock upon loss of signal is always a concern. Using the Gryphon200's Bit Acquisition tester users can find out the exact number of bits it takes an individual bit sync to regain clock on the data. This will tell the user the performance level of the Auto Gain Control.

The Gryphon200 allows the user to setup a PCM stream to test everything from Bit Syncs through Decoms including Recorders. Users can evaluate receiver performance when paired with a signal generator. Due to the fact that the Gryphon200 has a built-in internal Bit Sync, users can evaluate a receiver's BER performance separate from the ground station.



## BERT with Eb/N0 Noise

Utilizing an Analog Noise diode the Noise option for the Gryphon200 allows users to fully evaluate a Bit Syncs overall performance when subjected to a range of baseband noise. This unit allows users to set any dB noise level from -15 dB to -2 dB. The Automated Waterfall Tester built into the unit allows users to set a Noise Range for the unit to automatically setp through and measure at a given bit rate.

Individual sample points are taken at each Noise level to be plotted on the screen. A theoretical noise curve can be placed on the screen for analysis. This data can then be exported from the unit via the front USB port in a CSV file or a .jpg of the graph.

## Link Latency

The Link Latency tester provides accurate measurements of the round-trip link delay with an average delay calculated. This delay can be affected by but not limited to atmospheric conditions, cabling distance and individual unit performance.

Specifications subject to change without notice.