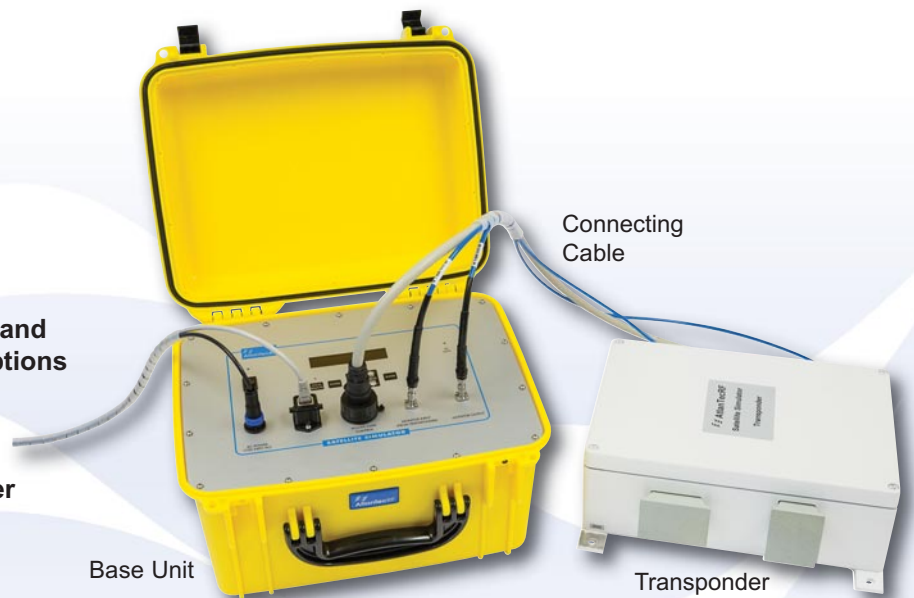


Ruggedised Satellite Simulator System

- Off-Satellite System Test
- Models for X, Ku, DBS, Ka and Q Band
- Linear and Circular Polarisation Options
- Transportable and Weatherproof
- Easy and Quick Operation
- Ethernet and Local Controls
- Two part – Base Unit & Transponder
- Fully Turnkey



General Specifications	
LO Step Size	25MHz
LO Stability over -10+50C	+/- 0.05ppm
Signal Related Spurious	-25dBc typ.
Non - Signal Related Spurious	-60dBc typ.
LO Related Spurs and Harmonics	-30dBm typ.
Antenna Gain, Tx and Rx	15dB nom.
RF Path Loss (exc Antennas)	0dB nom.
Attenuation Control	0-60dB, 1.0dB step
RF Output Monitor via SMA Female	-25dB nom.
Control and Monitoring	Local (Base Unit) or Remote Ethernet
AC Supply via IEC Connector	90 – 240V, 50/60Hz
Operating Temp Range	-10 to +50C
Interconnect Cables Supplied (Between Units)	Data / Power RF Monitor
Accessories Supplied	AC Power Cord RF Cable to connect to Spectrum Analyser SMA Torque Wrench
Size exc connectors etc:	
Base Unit - Inches (mm)	W14.9 x H12.13 x D9.58 (380) x (310) x (245)
Transponder - Inches (mm)	W13 x H4.5 x D9 (330) x (115) x(230)

The AtlantecRF RSS series of Ruggedised Satellite Simulator Systems is designed to provide a loop-back test for Satcom terminals without the need to access the satellite.

Comprised of two units, the Ruggedised Satellite Simulator is portable thereby facilitating the testing and calibration of terminals off-satellite. The base control unit is a weatherised, portable instrument with the capability of both local and remote, ethernet control and this is connected to a mast mounted transponder via a power and data cable.

The transponder communicates with the system under test (SUT) via appropriately polarised gain horns, receiving at the SUT transmit (Tx) frequency and transmitting at the SUT receive (Rx) frequency, thereby completing the loop-back without satellite involvement.

The local oscillator in the transponder is synthesised over its frequency range by either panel controls on the base unit or via ethernet with a GUI and input signal level is similarly controlled over a 60dB range in 1.0dB steps thus accommodating varying range distances from the SUT as well as a variety of Tx power levels.

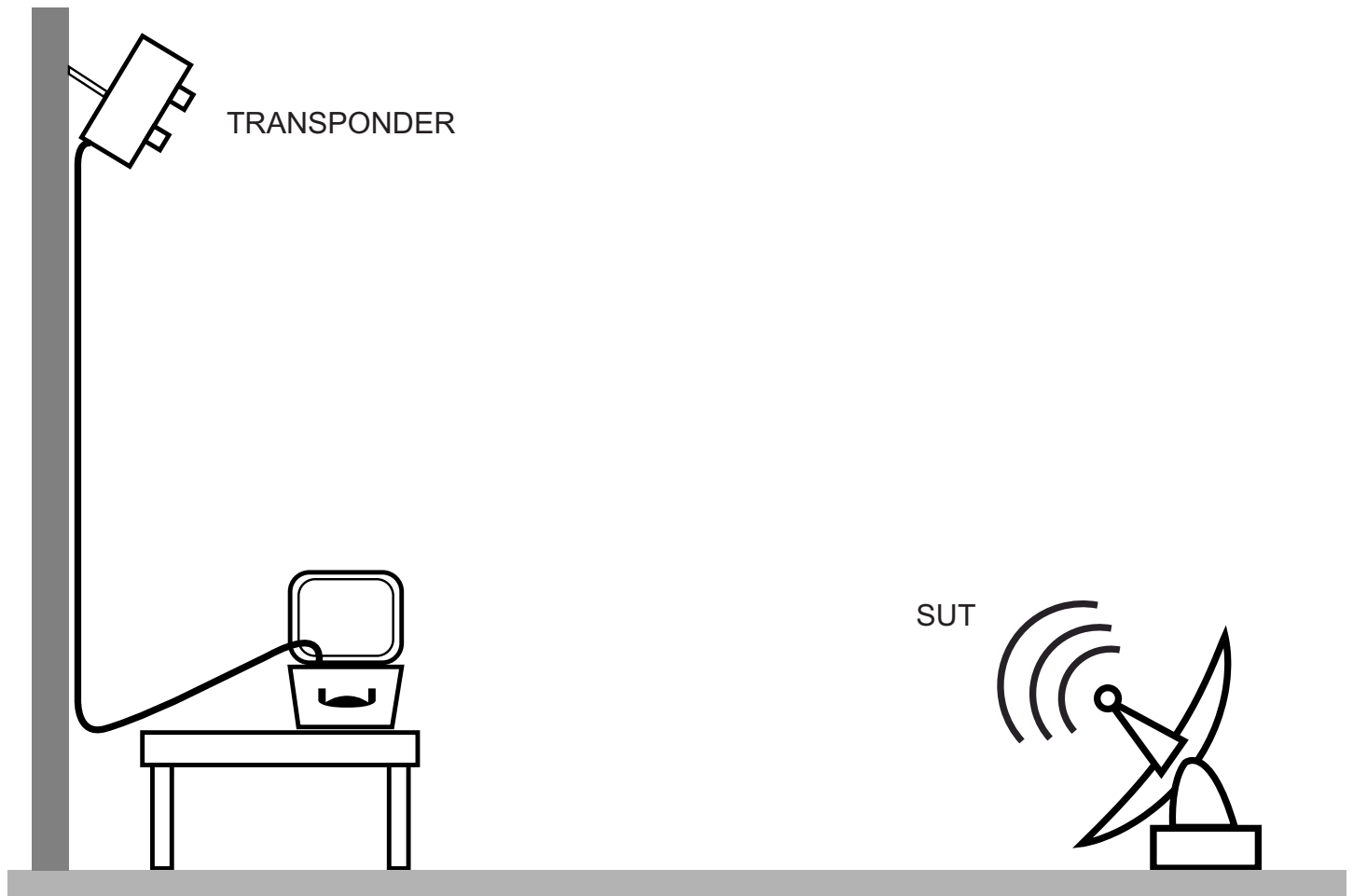
In addition to the transmission of the Rx frequency direct to the SUT antenna, a sample of this is fed back via coaxial low loss cable to the base unit and is then made available at the front panel for connection to a spectrum analyser or other test equipment.

LO Phase Noise (dBc/Hz) typical				
Offset Frequency (Hz)	LO Frequency (GHz)			
	2.0	10.0	12.0	25.0
100	-80	-70	-65	-60
1K	-90	-85	-75	-70
10K	-95	-90	-80	-75
100K	-95	-90	-80	-80
1M	-120	-115	-115	-110

Options:

- 00 Standard
- 02 One Part Option - Ethernet Only
- 03 Polarisation Option
- 04 Specific Programmed Frequency Steps
- 05 Switchable Internal 10MHz OCXO Reference
Frequency Stability +/-0.05ppm over 0 to +50C
+/-0.1ppm per year
- 06 Switchable Internal 10MHz OCXO Reference
Frequency Stability +/-0.005ppm over 0 to +50C
+/-0.02ppm per year
+/-0.05ppm all causes in 2 years
- 07 Alternative Attenuation Range
- 08 Alternative Conversion Gain
- 09 Special Custom Options

Ruggardised Satellite Simulator System



Proposed set up for the Ruggardised Satellite Simulator System

Model No	Input Frequency Range (GHz)	Output Frequency Range (GHz)	LO Frequency (GHz)
RSS - 00650065 - X	7.9 - 8.4	7.25 - 7.75	0.65
RSS - 08801095 - Ka	27.5 - 31.5	17.7 - 21.2	7.80 - 10.95
RSS - 04500800 - DBS	17.3 - 18.4	10.7 - 12.7	4.5 - 8.0
RSS - 01490330 - Ku	12.75 - 14.5	10.7 - 12.75	1.49 - 3.30
RSS - 23302530 - Q	43.5 - 45.5	20.2 - 21.2	23.3 - 25.3

We reserve the right to change standard product specifications without notice but will be pleased to consider control drawings for quotation.