LUCID SERIES THINK RF THINK LUCID

PORTABLE MODELS

Tabor's latest addition to its line of RF analog signal generators is by far the most advanced portable, handheld signal generator on the market. The all-new Lucid Series portable platform offers a modern design capable of operating either as a benchtop or a portable signal generator. The series feature 3, 6 and 12 GHz single channel versions, all sharing the very same industry leading highlighted features. Featuring superior signal integrity and purity, all the necessary modulated signals for analog communication systems, built in USB, optional LAN interfaces and removable micro-SD card, the Lucid Series is designed to meet today's most demanding applications, whether in the lab or out in the field.



3, 6 & 12GHz RF analog signal generator

Remotely programmable via MATLAB, Python, LabVIEW and other software programming environments.

Field ready, with 10" touch screen suited for day and night use and 2 hour battery operation



Removable uSD card for instrument security



Exceptionally Low Phase Noise of -145dBc/Hz @100MHz and 10@kHz offset

AM, FM, PM, Sweep & Modulation









Multiple Ways to Control the Unit and Write Your Code

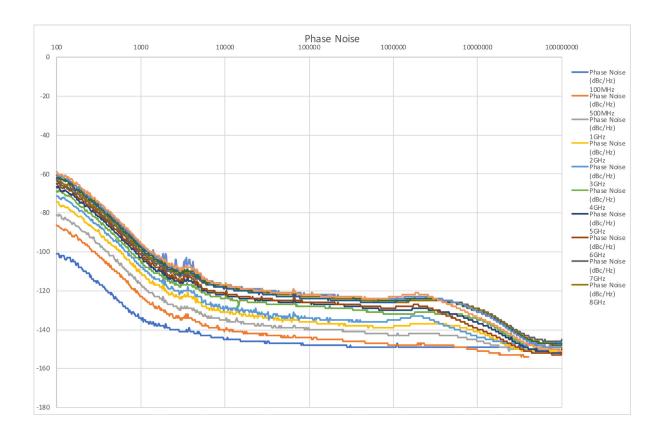
The Lucid Series has a dedicated software to control the instrument functions, modes and features via a graphical user interface (GUI). It also includes a complete set of drivers, allowing you to write applications in various environments, including LabVIEW, Python, CVI, C++, VB and MATLAB. You may also link the supplied DLL to other Windows-based API's or use low-level SCPI commands to program the instrument, regardless of whether the application is written for Windows, Linux or Macintosh operating systems.

Modulation Schemes

Signal bursts and chirps have become common need in most aerospace or defense application. With Tabor's Lucid Series, any signal modulation is possible, no matter if "narrow" or "standard" signals are required. On top of its outstanding pulse modulation performance, the Lucid Series is also equipped with many CW interferers, and modulated signals such as AM, FM, PM, Pulse, Pattern and Sweep.

Easy to use

The Portable platform offers a 10" touch screen with user friendly GUI to quickly and easily generate the required signal, while displaying all the critical information. For remote control, the series is equipped with a built-in USB interface enabling remote programming from PC. For those requiring LAN interface a USB to LAN converter can be provided.







Specifications

FREQUENCY	
Range:	
LS3081P:	9 kHz to 3GHz
LS6081P:	9 kHz to 6GHz
LS1291P:	9 kHz to 12GHz
Resolution:	0.001 Hz
Phase offset:	0.01 deg
Switching speed:	500 μs

FREQUENCY REFERENCE

Temp. Stability:	±25 ppb max.
Aging:	± 3 ppm for 20 years
Warm up time:	30 min

AMPLITUDE		
Max output power:		
Settable:	+20 dBm	
Calibrated:	+15 dBm ⁽¹⁾	
Min output power:	Base	LP Opt.
Settable:	-30 dBm	-100 dBm
Calibrated:	-20 dBm	-80 dBm
Resolution:	0.01 dB	
Power Mute:	-95 dBm	
Output Return Loss:	: -10 dBm	
Accuracy (dB):	-50dBm to +15dBm	-90dBm to -50dBm ⁽²⁾
Up to 100MHz:	±0.3 (typ.)	±0.5 (typ.)
100MHz to 3GHz:	±0.4 (typ.)	±0.6 (typ.)
3GHz to 9GHz:	±0.7 (typ.)	±0.9 (typ.)
Above 9GHz:	±1 (typ.)	±1.5 (typ.)

PHASE NOISE (dBc/Hz)		
Measured @ 10kHz offset		
1 GHz:	-138 (typ.)	
2 GHz:	-133 (typ.)	
3 GHz:	-130 (typ.)	
6 GHz:	-124 (typ.)	
12 GHz:	-118 (typ.)	

HARMONICS (dBc)	
Up to 100 MHz:	-30 dBc
100 MHz to 12 GHz:	-50 dBc ⁽³⁾

SUB HARMONICS (dBc)

6	to 12	GHz:	-55	dBm

NON HARMONICS (dBc)

Up to 12 GHz:	-90dBc (typ.) (4,5)	
	-buubt max.	

MODULATION		
FREQUENCY MODULATION		
Maximum Deviation:	10 MHz	
Resolution:	0.1% or 1 Hz (the greater)	
Modulation Rate:	1 MHz	
Resolution:	1 Hz	
AMPLITUDE MODULA	ATION (6)	
AM Depth:		
Type:	Linear	
Maximum settable:	90%	
Resolution:	0.1% of depth	
Modulation rate:	DC to 100 kHz	
PHASE MODULATION		
Peak Deviation:	360 deg	
Modulation Rate:	DC to 100 kHz	
PULSE MODULATION (PLS OPTION)		
On/off ratio:	60 dB	
Rise/fall time (10%-90%):	15ns (typ.)	
Resolution:	6.4ns	
Minimum Width:	32ns	
Repetition frequency:	DC to 10 MHz	
PATTERN MODULAT	ION (PAT OPTION)	
Number of steps:	1 to 2048	

1 to 65535

32 ns to 20 days

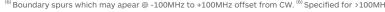
SWEEP		
Range:	Same as freq. range	
Modes:	Frequency and amplitude	
Dwell time:	10 μs to 1000 s	
Resolution:	1 μs	
Number of points:	2 to 65535	
Step change:	Linear	
Trigger:	Free run, External, Bus, Timer	

INPUTS		
MODULATION INPUT		
Connector Type:	SMA	
Input Impedance:	50Ω	
Max. input voltage:	±1V	
Input damage level:	±3.5V	
PULSE / TRIGGER INF	PUT	
Connector type:	SMA	
Input Impedance:	50Ω	
Input voltage:	TTL, CMOS compatible	
Threshold:	1.5V	
Damage level:	-0.42V or 5.42V	
EXTERNAL REFEREN	CE INPUT	
Connector type:	SMA	
Input Impedance:	50Ω	
Waveform:	Sine or Square	
Frequency:	10/100MHz	
Power:	-3 dBm to +10 dBm	
Absolute Max. Level:	+15 dBm	
Locking Range:	±2 ppm	

OUTPUTS	
RF OUT	
Impedance:	50Ω
Connector type:	SMA
Number of channels:	1

Step Repetition:

On/off time:







Specifications

GENERAL		
Voltage:	+12.0 to +12.6 VDC	
Supply Voltage:	+15 V DC	
Power Consumption:	60W max. (45W typ)	
Display Type	10", TFT capacitive touch screen	
Battery (included):		
Type:	4-cell, replaceable	
Standby:	Up to 2 hours	
Max. load:	Up to 1 hours	
Interface:		
Host:	2 x USB type A	
Device:	1 x USB type B 1 x micro USB for LAN adapter	
Storage:	Removable SD card	
Dimensions:	280 x 225 x 65 mm (W x H x D)	
Weight:		
Without Package:	3 kg	
Shipping Weight:	4.5 kg	
Temperature:		
Operating:	0°C to +40°C	
Storage:	-40°C to +70°C	
Warm up time:	15 minutes	
Humidity:	85% RH, non - condensing	
Safety:	CE Marked, IEC61010-1:2010	
EMC:	IEC 61326-1:2013	
Calibration	2 years	
Warranty*:	3 year standard * 1 year standard in India	

ORDERING INFORMATION	
MODEL	DESCRIPTION
LS3081P	3GHz Portable RF Analog Signal Generator
LS6081P	6GHz Portable RF Analog Signal Generator
LS1291P	12GHz Portable RF Analog Signal Generator
OPTION	
BAT	4-cell, replaceable battery (extra)
СНА	External Charger for the Lucid Portable Battery
PLS	Pulse Modulation Option
PAT	Pattern Modulation Option
LP	Low Power Option



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