Pattern Generator BPG 12G-TER

Wide-band pattern generator for bipolar return-to-zero and non-return-to-zero pulses at data rates up to 6 Ghz.

32 Megabit memory for programmable user pattern.

Variable pattern length.

Ternary output signal with adjustable amplitude.

Complementary outputs.

Latest technology with integrated circuits in SiGe, InP, GaAs as well as ECL-ASIC's.

Compact desktop design with lowest power consumption.

Operation only via USB-port.

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SHORT DESCRIPTION:

The wide-band tuneable pattern generator provides a programmable ternary data signal consisting of positive and negative pulses and zeros. A data rate between 50 Mhz and 6 Ghz is possible with an external clock generator.

The length of the user pattern is configurable from 16 digit up to 16,777,216 digit. Each digit can be set to a positive or negative pulse or to zero.

Generation of two or four different waveforms is possible by memory splitting.

The amplitude of the ternary data signal is variable between 1 V_{pp} and 2 V_{pp}.

At the front panel several trigger signals like a divided clock signal and the word frame are available.

Simple operation by user interface.

The data outputs can be switched over from RZ-code (Return-to-Zero) to NRZ-code (Non-Return-to-Zero).

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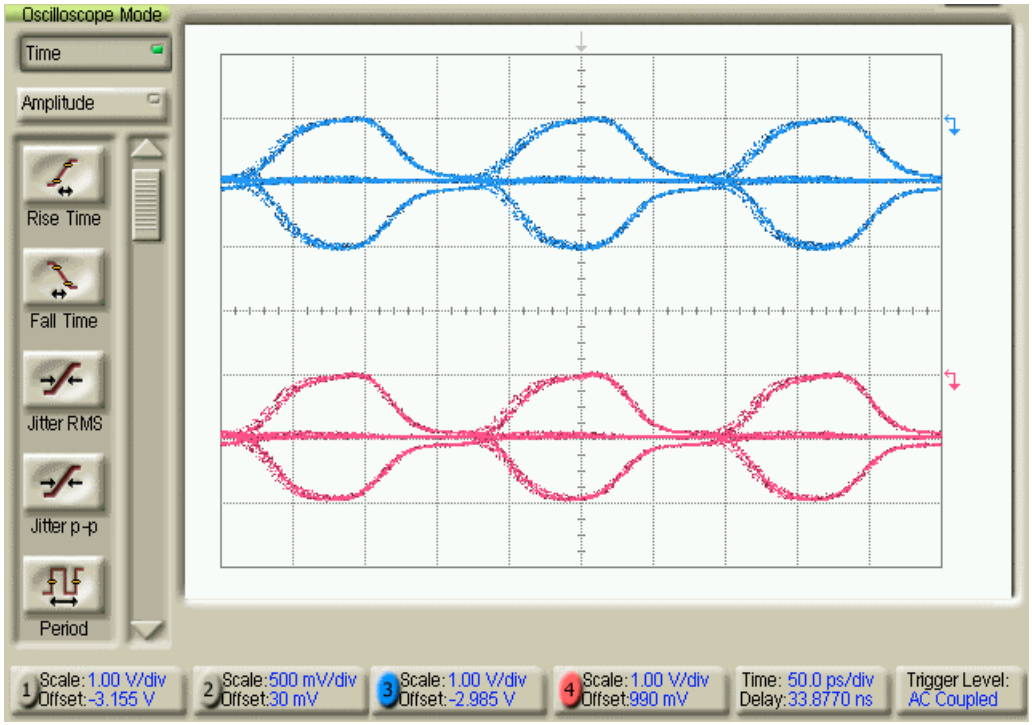
Pulse pattern at 6 Ghz clock rate:

(Amplitude 2 V_{pp}, 500 ps/div, 1 V/div)

Eye pattern of the ternary output signal at 6 Ghz clock rate, amplitude adjusted to 2 V_{pp}

(50 ps/div, 1 V/div)



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TECHNICAL DATA:

Clock rate:	10 Mhz ... 12 Ghz, continous (data rate = clock/2)
Clock Input:	U_i = 0.5 .. 1 V_{pp}, R_i = 50 Ohm, 50 Ohm SMA, |r| < 0.2 6 digit frequency display
Data Outputs:	Complementary outputs for bipolar data signals. Code: RZ (Return-to Zero) or NRZ (Non-Return-to-Zero) Amplitude: -U / 0 / +U with DC-offset voltage -U U = 0.5 ... 1.0 V +/-10% into 50 Ohm, U adjustable with 1 mV resolution. Rise/falltime < 50 ps (20/80%), Jitter (pp) < 10 ps SMA-connector 50 Ohm.
Pattern:	1. Pulse pattern 16 digit ternary coded, 2. Pulse pattern 32 digit ternary coded, 3. Pulse pattern 32 * m digit (m = 3, 4 ... 2^{19}) (= max. 16,777,216 digit ternary coded) 4. Pulse pattern consisting of two parts with the length of 32 * m digit (m = 3, 4 ... 2^{18}), 5. Pulse pattern consisting of four parts with the length of 32 * m digit (m = 3, 4 ... 2^{17}), All pattern are programmable and selectable by Interface. Polarity is selectable. The programmed pattern should have nearly the same number of positive and negative pulses.
Clock Outputs:	Clock/2, CML: 0V/-0.5V +/-0.1V, DC-coupled, 50 Ohm SMA Clock to data skew < 20ps Clock/64, 0,5 V_{pp} +/- 0,2 V, AC-coupled, 50 Ohm SMA
Trigger Output:	CML: 0V/-0.4V, 50 Ohm SMA 1. Clock/8 2. Word Frame Trigger
Interface:	USB, Data transmission up to 1 MByte/s Operation only via USB-Port
Mech. Dim.:	19" Desktop, W x H x D = 462 x 90 x 360 mm
Weight:	approx. 6 kg
Power Supply:	115V/230V/50Hz-60Hz/25VA
Option:	Output amplifier DC-coupled

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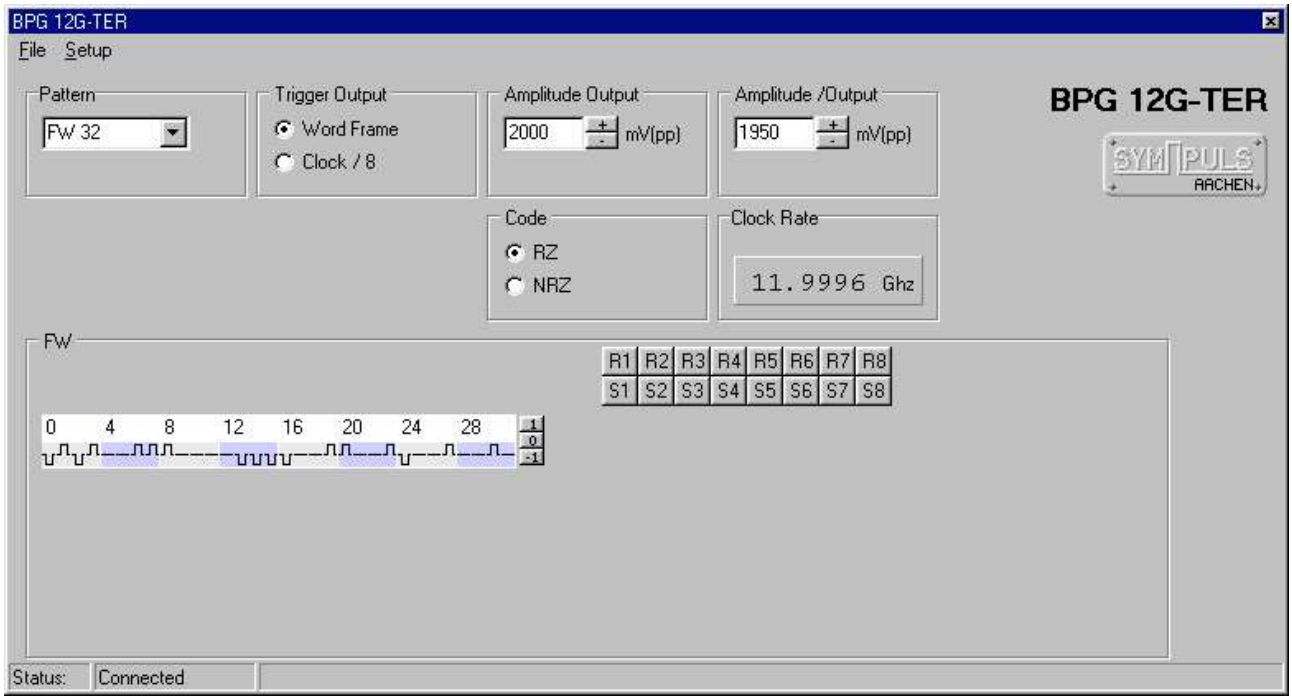
User Interface

All device settings as well as the programming of the ternary pattern can be done simply by mouse click.



Ordering Information:

BPG 12G-TER
115/230 V mains, user manual, USB cable set,
CD-ROM with device driver and operating software

The instrument is produced by SYMPULS in Germany.
We offer a reliable service and 24 month warranty.

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