metrix®

# Arbitrary Function Generators

## GX 1025
## 25 MHz

## GX 1050
## 50 MHz


## Multi-function communicating laboratory generators with built-in frequency meter:

- **Large high-contrast TFT colour screen** (320x240 mm)
- Frequency range from 0.001 mHz to 25 MHz (GX 1025) or 50 MHz (GX 1050)
- **DDS technology** on 2 outputs (coupling and duplication)
- 125 MS/s **sampling of signals** with 14-bit resolution
- AM, FM, FSK, ASK and PM modulation
- **SWEEP and BURST functions**
- External frequency meter from 100 mHz to 200 MHz
- **Programmable** via USB link with storage on USB key

metrix® A Brand of
CHAUVIN ARNOUX GROUP

## Technical Specifications

| | GX 1025 | GX 1050 |
|---|---|---|
| **Man-machine interface** | | |
| Display | Large high-contrast 3.5 '' TFT colour screen - resolution 320 x 240 | |
| Controls on front panel | 18 direct-access buttons, 1 rotary button | |
| Adjustment of signal parameters | Continuous adjustment by the encoder and/or numeric keypad | |
| BNC output terminals on front panel | Generator outputs 1 & 2 - Separate adjustment (waveform, f, phase, amplitude, etc.), coupled or duplicated | |
| BNC I/O terminals on rear panel | TTL-compatible trigger and synchronization outputs | |
| **Continuous signal generation** | | |
| Signal types | Sine, Square, Triangle, Ramp, Pulse, White Noise, Arbitrary Signal (48 pre-installed waveforms) | |
| **Arbitrary signal generation** | | |
| Resolution / Sampling rate | 14 bits / 125 MS/s | |
| Memory | 16k memory depth (512k on CH1 only) - Storage of predefined or specific signals on USB key | |
| Editing of signals with SX-GENE | Acquisition, transfer & modification of a signal acquired from an oscilloscope (OX6000, OX7000, Scopein@Box)<br>Graphical or mathematical editing with the SX-GENE software<br>Modification of a signal acquired and/or combination of standard signals from the generator | |
| **Signal frequency** | | |
| Frequency range | Sine from 0.001 mHz to 25.000 MHz,<br>Triangle 300 kHz, Noise and Square 25 MHz, Pulse 10 MHz, Arbitrary Signals 5 MHz | Sine from 0.001mHz to 50.000 MHz,<br>Triangle 300 kHz, Noise and Square 50 MHz, Pulse 20 MHz<br>Arbitrary Signals 5 MHz |
| Resolution / accuracy | 7-digit display – resolution from 1 mHz to 1 kHz depending on frequency range<br>± 20 ppm for F > 10 kHz , ± 30 ppm for F < 10 kHz | |
| Long-term drift | ± 100 ppm / year | |
| Temperature coefficient | < 5 ppm / °C | |
| **Amplitude** | | |
| Voltage levels | Output 1 = 2 mVpp ~ 10 Vpp 50 Ω 2 mVpp ~ 20 Vpp open circuit<br>Output 2 = 2 mVpp ~ 3 Vpp 50 Ω 2 mVpp ~ 6 Vpp open circuit | |
| Flatness | < 0.1 dB for f < 100 kHz | |
| Vdc offset | Output 1 = ± 5 VDC at 50 Ω, Output 2 = 1,5 VDC at 50 Ω – accuracy < 5% ±1 mV | |
| Impedance / Protection | 50 Ω / Protection contre les court-circuits | |
| **Signal characteristics** | | |
| Sine | Distortion < 0.2 % typical for f < 20 kHz, and harmonics < -50 dBc for DC < f < 25 MHz (level < 1 Vpp) | |
| Triangle (max frequency 2 MHz) | Linearity error < 1% max | |
| Square & pulse | Rise time < 12 ns (typ.) – Duty cycle 20-80% (DC < f < 20 MHz) – Pulse 20 ns to 2,000 s | |

**Modulation (internal or external source)**

| AM modulation | | FM modulation | |
|---|---|---|---|
| Carrier | Sine, Square, Triangle, Arbitrary (except DC) | Carrier | Sine, Square, Triangle, Arbitrary (except DC) |
| Modulated signals | Sine, Square, Ramp, Noise, Arbitrary (2 mHz-20 kHz) | Modulated signals | Sine, Square, Ramp, Triangle, Noise, Arbitrary (2 mHz-20 kHz) |
| Depth | 0% to 120% | Frequency offset | 0 to 12.5 MHz (GX1025) / 25 MHz (GX1050) |

| FSK modulation | | ASK modulation | |
|---|---|---|---|
| Carrier | Sine, Square, Triangle, Arbitrary (except DC) | Carrier | Sine, Square, Triangle, Arbitrary (except DC) |
| Modulated signals | 50% of duty cycle (2 mHz to 50 kHz) | Modulated signals | 50% of duty cycle (2 mHz to 50 kHz) |

| PM modulation | |
|---|---|
| Carrier | Sine, Square, Triangle, Arbitrary (except DC) |
| Modulated signals | Sine, Square, Ramp, Triangle, Noise, Arbitrary (2 mHz-20 kHz) |
| Phase offset | 0 to 360° |

**Other functions**

| Sweep | | Burst | |
|---|---|---|---|
| Carrier | Sine, Square, Ramp, Triangle, Arbitrary (except DC) | Signals | Sine, Square, Ramp, Arbitrary (except DC) |
| Type | Linear/Logarithmic | Type | Short (1-50,000 cycles), Infinite, Gate |
| Direction | Increasing or Decreasing | Phase start/stop | -180° to +180° |
| Sweep time | 1 ms to 500 s | Internal period | 1 µs to 500 s +/- 1% |
| Trigger | Manual, External, Internal | - | - |

| **External frequency meter** | |
|---|---|
| Measurement range / resolution | 100 mHz to 200 MHz |
| Sensitivity / Input impedance | 20 mVrms for 100 mHz < f < 100 MHz, 40 mVrms beyond / 1 MΩ |

## General Specifications

| | |
|---|---|
| Storage | Storage of predefined or specific signals and complete instrument configurations |
| Communication interface | USB Device, USB host - GPIB, LAN option |
| Mains power supply | 100~240 VACRMS 45~440 Hz CAT I - < 30W |
| Software | The SX-GENE software can be downloaded free of charge from our support website, along with the LV and LW drivers |
| Mechanical specifications | L x H x P = 229 mm x 105 mm x 281 mm - 2.8 kg |
| Warranty | 1 year |

**State at Delivery**

**GX1025 :** 25 MHz arbitrary function generator
**GX1050 :** 50 MHz arbitrary function generator

**State at Delivery**

1 GX delivered with 1 mains power lead,
1 USB cable and an Operating Manual.

Code : 906210271 - Ed.1 - 10/2011 - No contractual document, please confirm caracteristics before ordering

CHAUVIN ARNOUX GROUP

For information and ordering

**FRANCE**
**Chauvin Arnoux**
190, rue Championnet
75876 PARIS Cedex 18
Tel: +33 1 44 85 44 38
Fax: +33 1 46 27 95 59
export@chauvin-arnoux.fr
www.chauvin-arnoux.fr

**UNITED KINGDOM**
**Chauvin Arnoux Ltd**
Nelson Ct, Flagship Sq, Shaw Cross Business Pk
Dewsbury, West Yorkshire - WF12 7TH
Tel: +44 1924 460 494
Fax: +44 1924 455 328
info@chauvin-arnoux.co.uk
www.chauvin-arnoux.com

**MIDDLE EAST**
**Chauvin Arnoux Middle East**
P.O. BOX 60-154
1241 2020 JAL EL DIB - LEBANON
Tel: +961 1 890 425
Fax: +961 1 890 424
camie@chauvin-arnoux.com
www.chauvin-arnoux.com