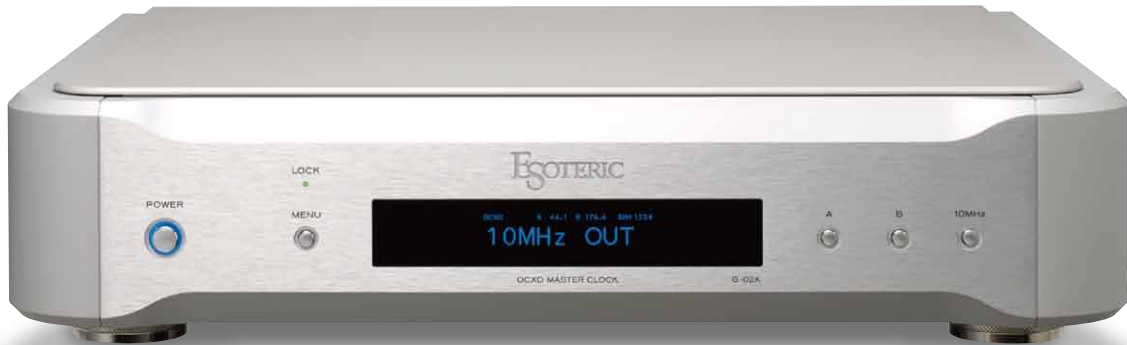


# ESOTERIC

## Master Clock Generator G-02X



The G-02X master clock generator adopts new technologies such as “Wide Range Clock Buffer Amplifiers”, “Adaptive Zero Ground” circuits, and a new custom made high-precision OCXO to attain the very best in musical expression from your digital audio system.



Master Clock Generator G-02X

#### Master clock generator

A 'clock' is a pulse signal that is used as a reference signal for all digital circuits. Every piece of digital gear has an on-board clock oscillator, and a high-quality clock is vital for precise, jitter-free signal processing. The G-02X is an external clock device designed to supply ultrahigh precision clock to digital devices (such as a transport, DAC, SACD player, or network audio player) equipped with dedicated input terminals. The G-02X can supply clock signals with a significantly higher degree of purity and stability than clocks generated by connected devices themselves, and thereby significantly improves the sound quality.

#### Ultrahigh Precision OCXO

The core of the unit features a custom OCXO (Oven Controlled Crystal Oscillator) newly developed by ESOTERIC that is comprised of an oven that maintains a constant internal temperature, a crystal oscillator, and an oscillating circuit. This OCXO was designed for high audio quality based on the wisdom of the Grandioso series to provide an excellent center frequency precision ( $\pm 0.01$  ppm Typ), and reduces phase noise by approximately 3 dB\* compared to previous model. \*Measured at an offset frequency of 100 kHz



#### “Wide Range Clock Buffer Amplifier”

The unit adopts the “Wide Range Clock Buffer Amplifiers” developed for the Grandioso G1. These discrete circuits utilize high-speed transistors with excellent performance at high frequencies and are separated for each output terminal to contribute to improved sound quality.

#### “Adaptive Zero Ground” Mode

The G-02X has the “Adaptive Zero Ground” circuitry inherited from the Grandioso G1 between the internal OCXO and the buffer amplifiers. The “Adaptive Zero Ground” mode actively drives the ground signal to 0 volts and greatly reduces noise (random jitter) caused by variation in the ground voltage. The user can select between the adaptive mode and the normal mode, for different sound characteristics according to their listening preferences.

#### Substantial Power Supply

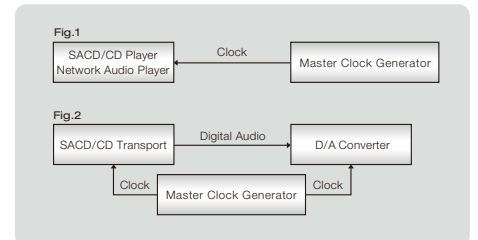
A newly-designed power supply is adopted to maximize the performance of the new “Wide Range Clock Buffer Amplifiers”, with the amplifier and power supply divided into blocks to ensure drive that is both clean and powerful. A toroidal transformer is used as the main transformer and a dedicated EI core transformer is used for control. A series of multiple capacitors are used for the ripple filter circuit and Schottky barrier diodes are used for quick response to support fast digital processing.

#### Eight Outputs

The G-02X can supply a clock signal to a maximum of eight devices. Output can be switched ON and OFF for each terminal. The unit has four 10 MHz sine wave clock output terminals. The other four output terminals (A x 2 and B x 2) enable clock signals to be output at 100 kHz, 10 MHz (square wave), and the basic frequency of 44.1 kHz/48 kHz, up to a maximum frequency of 22.5792 MHz/24.576 MHz, and separate output frequencies can be set for each terminal.

#### Other Functions

External 10 MHz Input for External Clocks  
Milled Brass Gold Plated BNC Terminals  
Preheat Function for Internal OCXO  
Organic EL Display



#### Specifications

**Clock outputs** CLOCK OUT 44.1 kHz setting 44.1/88.2/176.4/352.8/705.6 kHz, 1.4112/2.8224/5.6448/11.2896/22.5792 MHz 48 kHz setting 48/96/192/384/768 kHz, 1.536/3.072/6.144/12.288/24.576 MHz  
**Both settings** 100 kHz/10 MHz **Connectors** BNC x4 **Output level** Rectangular wave: TTL level/75  $\Omega$  10 MHz OUT 10 MHz **Connectors** BNC x4 **Output level** Sine wave: 0.5 $\pm$ 0.1 Vrms/50  $\Omega$  **Standard frequency input (EXT IN)** **Input frequency** 10MHz (within  $\pm 10$ ppm) **Connector** BNC x1 **Input levels** Sine wave: 0.5-1.0 Vrms/50  $\Omega$ , Square wave: TTL level/10k  $\Omega$  **OCXO (Crystal oscillator)** Until oscillator stabilizes after power turned on 10 minutes **Frequency stability** Within  $\pm 0.015$  ppm (0°C to 70°C) **Frequency precision**  $\pm 0.01$  ppm Typ (When shipped new)/(ppm =  $10^{-6}$ ) **General Power supply** AC 230 V, 50 Hz / AC 120 V, 60 Hz / AC 220 V, 60 Hz **Dimensions (W x H x D)** (including protrusions) 445 x 107 x 359 mm (14 5/8" x 4 1/4" x 14 1/4") **Weight** 11.3 kg (25 lb) **Included accessories** Power cord x 1 / Felt pads x 3 / Owner's manual x 1 / Warranty card x 1

PROUDLY MADE IN TOKYO

**ESOTERIC**

ESOTERIC COMPANY

1-47 Ochiai, Tama-shi, Tokyo 206-8530, Japan  
Fax: (042) 356-9240  
www.esoteric.jp

- This product is available in three different power supply variations shown in the specifications above.  
- Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.  
- The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.

Please note that Esoteric products are only available from approved distributors in overseas territories.

\*ESOTERIC is a trademark of TEAC Corporation, registered in the U.S. and other countries.

\*Grandioso is a trademark of TEAC Corporation.

©2017 TEAC Corporation. All Rights Reserved. All text, images, graphics and other materials in this catalog are subject to copyright and other intellectual property rights of TEAC Corporation. These materials may not be directly or indirectly published, reproduced, modified or distributed in any medium.

Other company names and product names in this document are the trademarks or registered trademarks of their respective owners.

Design and specifications are subject to change without notice.

PRINTED IN JAPAN 0117005-TECD-0248