Last Update : 2024/08/08

Supplemental to New Product Information (SNPI)

CG-10M-X

Master Clock Generator

The CG-10M, a 10MHz master clock generator with TEAC Reference OCXO, is now updated to "X" edition for higher sound quality.

Main Features

- High-precision "TEAC Reference OCXO" – an 'oven-controlled' crystal oscillator
- ±3 ppb frequency temperature characteristics, ±0.1 ppm frequency precision
- 4 x 10MHz clock output connectors (gold-plated BNCs)
- Completely independent and isolated circuit
- Refined buffer amplifier/power supply circuitry for higher sound quality
- Large toroidal-core power transformer
- Oven Status Gauge with dimmable backlight, for monitoring oscillation stability
- 3-point support "Stressless Foot" isolation foot for a natural and full sound
- High quality aluminum chassis, resistant to radio noise
- Semi-floating aluminum top panel for open sound and elegant look

Brand	TEAC	
Model Name	CG-10M-X/B	CG-10M-X/S
Color	Black	Silver
EAN Code	4907034225279	4907034225286
UPC Code	0043774036196	0043774036202
Announcement Date	Late July, 2024	
Product Dimensions (W x H x D) / NW	290 x 84.5 x 248.7 mm / 11.4" x 3.3" x 9.8" 3.6 kg / 7.9 lbs.	
Package Dimensions (W x H x D) / GW	444 x 193 x 345 mm / 17.5" x 7.6" x 13.6" 4.6 kg / 10.2 lbs.	

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Overview

The CG-10M-X is a master clock generator that delivers an extremely accurate clock signal to DACs, network audio players, and CD players, allowing them to perform at their ultimate best.
The crystal oscillator at the heart of the CG-10M-X is an OCXO (Oven Controlled Crystal Oscillator), which is equipped with a thermostatic chamber to ensure high oscillation stability. An analog oven status meter prominently displayed on the front panel allows the user to check the internal operating status of the OCXO from the outside at any time.
In the new "X" Edition, the output buffer amplifier circuit, power supply circuit, and other details have been refined to achieve even higher sound quality. The chassis construction has also been redesigned with a semi-floating top panel and “Stressless Foot” for a more open, natural and full sound. The elimination of the top panel screws emphasizes the clean, elegant look of the CG-10M-X. Available in silver or black to match the Reference 500 Series with which it is paired.

Master Clock Generator

In the world of high-end audio, it is a key component for high-quality sound reproduction on digital audio players. In the world of professional music production, it is an essential tool for integrating an increasingly complex digital environment. Today, master clock generators are indispensable for achieving the ultimate level of audio quality.
All digital audio equipment has an internal clock circuit and uses the generated clock signal for digital signal processing. The clock signal is the basis for all digital signal processing. For example, a digital signal such as a PCM signal, which is extremely finely divided into tens of thousands of parts per second along the time axis, cannot be converted back to an accurate analog waveform if the fundamental time axis on which the signal is based fluctuates during D/A conversion. This is especially true for DSD audio signals, which operate at MHz speeds along the time axis. The Master Clock Generator is an essential device for providing an external high-precision master clock to a digital device, enabling it to reproduce sound more faithfully to the original master.

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TEAC Reference OCXO - An Oven-controlled Crystal Oscillator

Since temperature has a huge effect on accuracy of the crystal oscillator, minimizing temperature changes and maintaining it at an ideal level are extremely important in order to generate an accurate clock signal. The CG-10M-X employs an innovative oven-controlled crystal oscillator, the TEAC Reference OCXO to reduce oscillation frequency fluctuations caused by temperature changes.

A Class-Leading Ultra High-Precision Clock

Thanks to the TEAC Reference OCXO, the CG-10M-X delivers an ultra high-precision 10MHz clock signal – within ±3 ppb of frequency temperature characteristics and within ±0.1 ppm of frequency precision – to DACs and digital players.

A unique laser-engraved serial number and the TEAC Reference OCXO logo on every OCXC case is proof of the rigorous quality inspection undertaken during the manufacturing process.

ppm=10^{-6}, ppb=10^{-3}

Frequency temperature characteristics: A value of frequency fluctuation caused by temperature change

Frequency precision: An actual frequency range

Four BNC Clock Output Connectors

Four gold-plated BNC connectors (50 ohms) are provided to deliver clock signals to multiple devices. Up to four devices that support a 10MHz input may be connected simultaneously, including DACs, network players and Super Audio CD/CD players, digital transports.

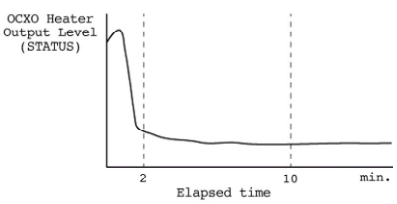
Independent and Isolated Circuit Design

Each circuit in the CG-10M-X – from the power supply section to the buffer-amp at the output stage, – is completely isolated to prevent cross-interference when multiple devices are connected to the BNC connectors.

By incorporating a buffer-amp into each circuit, no degradation of the signal waveform occurs when the generated clock signal is shared by several devices.

In the "X" edition, the buffer-amp circuit, the power supply circuit have been refined to achieve an even higher level of sound quality.

Oven Status Gauge for Clock Stability Monitoring



The Oven Status Analogue Gauge located in the middle of the unit, a TEAC trademark in recent years, shows the stability of the crystal oscillator when in use. As the temperature of the oven that contains the crystal oscillator reaches to the ideal temperature for accurate clock generation, power consumption of the oven decreases and the gauge points to zero, signaling to the user that the digital processing on the connected device is now controlled by an extremely accurate 10MHz clock signal. The gauge is a backlit-type with a dimmer control (including the ability to completely switch the backlight off).

Note: The oscillator is usually stable about 2 minutes after the power is turned on. However, at least 10 minutes are necessary for the clock to reach an ideal condition.

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Toroidal-Core Power Transformer

A high-capacity, toroidal-core power transformer constantly supplies a constant, stable current that contributes greatly to the efficacy of the crucial clock generation and its subsequent high-precision output.

3-Point Support Stressless Foot

CG-10M-X newly adopts the original 3-point support "Stressless Foot". This isolation foot enables stable installation without being affected by even the slightest distortion of the floor surface. Unlike conventional isolation feet, this foot was developed with the concept of creating a gap between the foot and the bottom chassis, allowing the foot to vibrate freely, resulting in a more natural sound. The machined steel foot is suspended from the bottom, providing a more natural and fuller sound in addition to the accurate imaging of the previous pinpoint spike foot design.

Semi-Floating Top Panel

The CG-10M-X's aluminum top panel features a new semi-floating construction. Instead of being firmly screwed to the chassis, the top is loosely mounted in the slots of the side panels for a superior open sound. With a clean, screwless top panel, the CG-10M-X blends elegantly with the high-end digital players it is paired with.

A Bobust Full-Metal Chassis, Combined with an A4-Size Footprint

Designed to match the successful Reference 500 Series, the CG-10M-X features aluminum panels and a robust metal chassis (that also isolates it from electromagnetic noise), with a compact A4-size footprint that will fit anywhere.

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Features at-a-glance

- High-precision "TEAC Reference OCXO" – an 'oven-controlled' crystal oscillator
- ±3 ppb frequency temperature characteristics, ±0.1 ppm frequency precision
- 4 x 10MHz clock output connectors (gold-plated BNCs)
- Completely independent and isolated circuit
- Refined buffer amplifier/power supply circuitry for higher sound quality
- Large toroidal-core power transformer
- Oven Status Gauge with dimmable backlight, for monitoring oscillation stability
- 3-point support "Stressless Foot" isolation foot for a natural and full sound
- High quality aluminum chassis, resistant to radio noise
- Semi-floating aluminum top panel for open sound and elegant look

Specifications

Clock Outputs	
Connectors	BNC x 4 (gold-plated)
Output Sampling Frequency	10MHz
Output Impedance	50 ohms
Output Level	0.5Vrms (sine wave)
OCXO (Crystal Oscillator)	
Clock stabilization time	2 minutes
Frequency temperature characteristics	within ±3ppb
Frequency precision	within ±0.1ppm (when shipped new)
General	
Operation Power	
US/Canada	AC 120V, 60Hz
UK/Europe	AC 220-240V, 50Hz
Power Consumption	
US/Canada	15.4W (warming up), 10.0W (stable)
UK/Europe	15.8W (warming up), 10.8W (stable)
Overall Dimensions (W x H x D)	290 x 84.5 x 248.7 mm / 11.4" x 3.3" x 9.8"
Weight (Net)	3.6 kg / 7.9 lbs.
Operating Temperature	+5°C to +35°C
Included Accessories	Power cord x 1
	Pads x 3
	Owner's Manual (including Warranty Card)

Rear View