

FRQGEN - 2
DDS-BASED FREQUENCY GENERATOR

User's Guide

FRQGEN is an 'audio' frequency generator (1Hz to 25MHz). It achieves extremely high stability thanks to the latest technology DDS-based frequency generator which provides better stability than that typical of PLL-based systems.

To operate you must connect DC from 9-13.8V (center pin positive) to the power supply jack. Absolute maximum 24VDC.

Connect your audio source to the corresponding yellow RCA jack.

O P E R A T I O N

The FRQGEN features an 16-character by 2-line LCD and a 4-button keyboard. Optionally, it may include a rotary encoder switch instead of the keyboard. When powered up, the LCD displays a brief version and copyright message followed by the current audio frequency.

The keyboard buttons are marked as follows:

- [↑] Acts as [Up]. Cycles through the possible choices in a forward or upward direction. *Menus with only two possible choices use the [●] key instead to toggle between the two.*
- [↓] Acts as [Down]. Cycles through the possible choices in a reverse or downward direction. *Menus with only two possible choices use the [●] key instead to toggle between the two.*
- [■] Acts as [Menu] or Escape. Cycles through the possible menu screens (the sequence is shown farther below), or selections within a single menu screen. For menus that require [●] to be pressed to accept the changes, this button can be used to escape from the changes made so far if pressed instead of [●].
- [●] Acts as [Enter]. Accepts the current setting in some menus. *Note: Some choices may become active immediately when selected with the [↑]/[↓] buttons while others are activated only by pressing [●].*

When using the rotary encoder switch, the same four basic actions are possible as follows:

- [↑] To get this action, simply turn the knob to the right.
- [↓] To get this action, simply turn the knob to the left.
- [■] While holding the knob firmly pressed, turn it either clockwise or counter-clockwise to select the next or previous menu screen, respectively. When the menu screen you want to access is showing on the LCD, release the knob.
- [●] To get this action, simply press the knob in and then release it out again (without any turning while it is pressed).

M E N U S E Q U E N C E

The menu sequence is as shown below (and it is subject to change without notice). Menus do not necessarily show these exact titles. The titles below are indicative of the function and may appear slightly different on the actual LCD.

FREQ | MODE | MEMORY | SAVE | LOAD

FREQ Allows selection of the audio frequency, using the Memory indicator [M00] to [M09] (*cursor under memory channel*) to select one of the pre-set memories (*which you can change via the MEMORY menu*), or by directly changing the frequency from 1Hz to 25MHz using a 1Hz step (*cursor under Hz*) up to a 10MHz step (*depending on the cursor position*). The new frequency is active immediately. Press [●] as many times as needed to move the cursor under a different selection element (i.e., Hz, KHz, or Memory Channel, in a circular fashion). While changing the frequency, the M00 to M99 memory indicator may appear at times. This indicates that the specific frequency you have selected and currently showing on the LCD is also stored in the shown memory location. If the frequency is not stored in any memory, the M00 to M99 indicator will disappear. *If a single frequency is stored in multiple memory locations, only the first memory location will be displayed.*

MODE Allows cycling among Sine, Triangle, and Square waveforms for the specific frequency tone. Press the [●] button to return to the frequency display screen. Press the [↑] or [↓] buttons to change the waveform. The change is effective immediately.

MEMORY Allows saving the current frequency to a memory channel. One hundred channels are available, numbered from zero (00) to ninety-nine (99). To set a memory with some frequency, first select the frequency from the FREQ menu. Next, press [■] to go to the MEMORY menu. Press [↑] or [↓] to change the displayed memory index. Once the correct memory index (e.g., M03) is shown on the bottom LCD line, press the [●] button to store the current frequency to this memory. The message "STORED" will appear briefly. *Make sure you save any changes for next power up, if required (see SAVE menu).*

SAVE Saves current settings (frequency, memories, waveform, etc) to internal non-volatile memory. These will be the settings used when the FRQGEN is powered next time. Press [●] to save the settings or [■] to leave this menu.

LOAD Loads the settings saved in the internal non-volatile memory. It is almost the same as cycling power to your unit. Press [●] to load the settings or [■] to leave this menu.

A U D I O L E V E L A D J U S T

The unit is factory trimmed, the blue trimmer can be used to adjust the audio level. Turn clockwise to increase the audio level. Maximum output is 10VPP at 8Ω sine wave.

C O N N E C T I O N D E T A I L S

Please see the diagram at the end of this document for connections.

Thank you for purchasing the FRQGEN by ASPiSYS Ltd.

Technical Specifications

Subject to change without notice

Output Frequency	1Hz to 25 MHz
Minimum Step	1 Hz
Memory Channels	100 (M00 to M99)
Waveforms	Square, Sine, and Triangle
Display	LCD 2x16 backlit
Frequency Accuracy	+/- 0.5Hz max. (DDS)
AF Output Level	10VPP @8Ω
RF Output Level	250mV @200Ω
AF Level Control	Adjustable via on-board trimmer
Operating Voltage	9-13.8VDC at 800mA max.



For technical support email support@aspisys.com, or write to:
 ASPiSYS Ltd., P.O.Box 14386, Athens 115 10, Greece (EU), or call: (+30) 210 771-9544 FAX: (+30) 210 771-4983.
 We are in the GMT+2 time zone.

