Audio Generator

Model 72-490

Highly versatile compact audio generator is perfect for sound system and speaker component testing. Its high precision and remote VCO input make it suitable for the serious test environment, yet its compact size and low cost make it suitable for any tool box. This device is designed to be connected to the line level of any consumer or commercial designed audio amplifier. While it is designed to be used with unbalanced inputs, it is also suitable for balanced equipment.

Features

▪Rotary output frequency adjustment
▪Independent sine and square wave outputs, each with their own level control
▪VCO input for remote frequency setting
▪1/4" unbalanced outputs
▪Selectable 0dB/10dB output attenuator
▪AC adaptor included

Specifications

▪Frequency range: 20Hz~20KHz ±1dB
▪VCO input: 1.2~5.0VDC for full frequency output
▪Output level: +11dB (sine), +14dB (square)
▪Output impedance: 100ohm
▪THD (sine wave): 1%
▪Power requirements: 12~16VDC, tip polarity (–)
▪Dimensions: 1.57" (H) x 4.49" (W) x 2.87" (D)

Operation

- Prior to connecting to amplifier input, make certain the AC adaptor is connected to the Audio Generator and the **SINE LEVEL** and **SQR LEVEL** are set to the minimum.
- Make certain the amplifier power is switched off.
- Set the PAD button to the IN (-10dB) position.
- Using a suitable shielded audio cable, connect either the SQR OUT or SINE OUT to your amplifiers input. **Note:** It is possible to use these two outputs simultaneously on two separate amplifier channels.
- Switch the amplifier power on.
- With the amplifier set at a normal listening level, slowly increase the output **LEVEL** of the Audio Generator until the tone reaches the desired level. Make certain that you adjust the **LEVEL** that corresponds to the output that is being used (either **SINE** or **SQR**).
- If the maximum level setting does not reach the desired output level, reduce the **LEVEL** control to minimum and change the PAD button to the NORMAL position. Again, slowly increase the output **LEVEL** of the Audio Generator until the tone reaches the desired level.
- Adjust the **FREQUENCY** control to the desired tone frequency.

Caution

- Continuous sine and square wave signals can be damaging to speaker and amplifier components at high volume levels or for extended periods of time.
- Due to variances in frequency response of amplifier circuits and speaker systems, the audible signal level may appear to change with **FREQUENCY** adjustment.

VCO Input

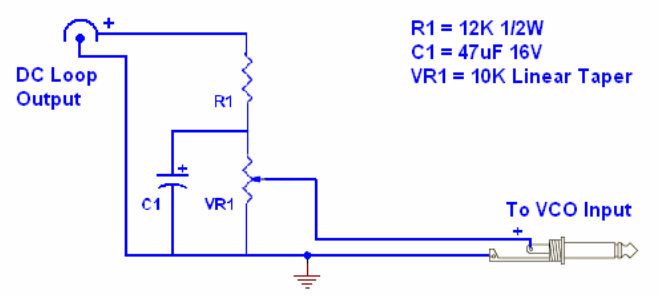
This input allows the Tenma Audio Generator tremendous capabilities as it enables the output frequency to be controlled by an external source. Applying DC input voltage from 1.2V~5.0V provides linear frequency adjustment from 20Hz~20KHz, enabling the following possibilities:

- Connection to a programmable power supply, creating a programmable sweep function generator.
- Connection to a user designed interface, creating a computer controlled audio generator.
- Connection of a remote potentiometer for easy frequency adjustment from a remote location.

This input is designed to provide frequency control from 20Hz~20KHz, with 1.2V~5.0V input voltage. This input will accept voltages up to 14.0VDC without damage, however the frequency adjustment will not be linear above 20KHz.

When a 1/4" connector is inserted into the **VCO INPUT**, the front panel **FREQUENCY** control is inactive.
Note: The control voltage polarity is TIP (+); SLEEVE (–).

DC LOOP output is provided to enable multiple 12VDC interface devices to be daisy-chained to a common DC power supply. It is also possible to use this output as a voltage supply to the VCO input. By connecting suitable components as shown in the following diagram, a remote mounted potentiometer may be used, without the need for a separate VCO power source.



Take note that the TIP polarity on the DC LOOP output is (–), while the TIP polarity on the VCO input is (+).

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