



**TANDM SOLUTIONS LTD**

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SGVA-201 Signal Generator Voltage Amplifier

# User Guide

SGVA-201

# **User Guide** (rev 1.0)

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# SGVA-201 Signal Generator Voltage amplifier

## Overview

The SGVA-201 is designed to amplify the output voltage from any standard Signal Generator or frequency generator that produces an output voltage of up to  $\pm 10$  Volts.

The amplifier has a fixed gain of two, meaning that twice the voltage of the input signal is produced at the output. For example  $\pm 5$ Volts in will give  $\pm 10$ V out (20Volts Peak to Peak). It also provides a direct current drive of up to 400Ma into a 50 Ohm load.

**Use with National Instruments Analog Output or multifunction cards that include an analog output signal.**

The SGVA is the ideal accompaniment to the National Instruments (NI) range of data acquisition boards that include analog output functionality. The standard output of the NI cards is  $\pm 10$ V max at low current drive capability. The SGVA-201 enables these outputs to drive higher voltages with higher current capability.

The current drive output enables the unit to power some servo drives directly without the need for a proprietary servo drive controller board. (Providing the drive required is less than 400Ma).



## Connections

The input connections on the rear of the unit:

- Power input – 12V DC wall socket power supply
- Input – BNC Input to the amplifier from the signal generator (+-10V Max)

Output connections on the front of the unit:

- Signal output – BNC Output from the amplifier (Gain of 2 x input voltage, Max +-20Volts, 40 Volts Pk/Pk)
- Power on LED – Green when power is connected
- Overheat protection LED – The amplifier has a built in temperature protection circuit. Should the amplifier temperature exceed its safe working temperature the output will return to a zero voltage output and the Red LED will show on the front panel. If this occurs, turn the unit off and wait until the temperature returns to a safe level before turning back on.
- Current Monitor output – BNC current monitor output enables real time monitoring of the current draw on the output during operation.

## Specifications

Amplifier Gain:	2 times the input voltage
Max input voltage:	+10V
Max output voltage:	+20V
Max drive current:	400Ma
Frequency response:	DC to 400KHz signals
Overheat protection	The amplifier has a built in temperature protection circuit. Should the amplifier temperature exceed its safe working temperature the output will return to a zero voltage output and the Red LED will show on the front panel. If this occurs, turn the unit off and wait until the temperature returns to a safe level before turning back on.

