



The SGC 04 4-Channel Smart Gain Control offers a seamless and automated solution for adjusting PA announcement volumes, ensuring audibility regardless of ambient noise levels. Specifically developed for deployment in dynamic environments such as transportation hubs (airports, train stations, bus terminals, etc.), factories, shopping malls, and restaurants where ambient noise can be unpredictable due to large crowds.

Featuring four independent channels of Smart Gain Control, each fully user-programmable, the SGC 04 includes a dedicated input for its own SGC AS 01 Ambient Noise sensing microphone. This innovative unit analyzes ambient noise and dynamically adjusts the gain of announcements,

ensuring they are consistently louder than the ambient noise, thereby enhancing speech intelligibility.

Installed between the Preamplifiers and the power amplifier, the SGC 04 unit is an integral component. It comes equipped with a Software Engineering Tool User Interface (UI), allowing users to configure various settings. This includes customizing the 'Ambient Threshold Value' for each channel, adjusting attack time and hold time, and providing real-time ambient noise readings. The SGC 04 is a sophisticated solution designed to enhance the clarity and effectiveness of PA announcements in challenging acoustic environments.

- 4 independent channel of automatic gain control.
- Digital Signal Processing (DSP) control of output volume based on the ambient noise level sensed by the SGC AS 01 Ambient Sensor microphone.
- Each channel shall allow input from a dedicated SGC AS 01 Ambient Sensor microphone.
- User-friendly Software engineering tool (UI) for quick and easy configuration of channel
- Monitor the ambient noise level dB via the Engineering Tool UI.
- Emergency override and automatic power failure bypass



SGC 04



SGC AS 01

Technical Specification

| | SGC 04 |
|------------------------------|---|
| Power Requirement | 24 Vdc, 0.25A |
| Frequency Response | 20 – 20,000 Hz (±3 dB) |
| Sampling Frequency | 48 kHz |
| Dynamic Range | Over 90 dB |
| Distortion | Under 0.01%, 1 kHz, 0 dBV input/output (20 – 20,000 Hz BPF) |
| Input | Sensor input (Ambient noise sensor microphone input): 22V Phantom electronically-balanced, XLR female. Input Channel 1-4: 0 dBV Electronically-balanced, RJ45 Connector |
| Output | Output Channel 1-4: 0 dBV, 150 Ω, Electronically-balanced, RJ45 Connector |
| A/D Converter | 24 bit |
| D/A Converter | 24 bit |
| Signal Processing | Ambient noise control function: Sensor input reference level fine adjustment function, Signal processing bypass via emergency override dry contact, Sample time setting (GUI configurable 6 s, to 120 min), Fixed gain setting (0dB to +24 dB), Fixed ambient noise measuring frequency window (250 – 4500 Hz, 8th Order bandpass, speech) |
| Configuration | Engineering Tool User Interface (UI) |
| Override and Bypass | 4-channel emergency override dry contact input with LED indication Input/Output bypass function during power failure |
| Operating Temperature | 0°C to 40°C |
| Material & Finish | Mild Steel Casing, Epoxy Coated Textured Black |
| Dimensions | 483 x 44 x 200 mm (W x H x D) |
| Weight | 2.9 kg |

Technical Specification

| | SGC AS 01 |
|------------------------------|---|
| Audio Signal Output | 0 dBV, 100 W |
| Frequency Response | 100 Hz – 16 kHz |
| Directivity | Omnidirectional |
| Connector | 3 Pin terminal block (Balanced Audio) |
| Material & Finish | ABS, White |
| Power Requirement | 9 – 25 Vdc, 15 mA Phantom power Supplied via SGC 04 |
| Dimensions | 86 x 86 x 49 mm (W x H x D) |