

SGVA100

WIRELESS VOICE ANNUNCIATOR



GENERAL DESCRIPTION

The **SGVA100** wireless voice annunciator is an output device which reproduces voice messages and can be activated, in the event of alarms, faults or emergency conditions, by the control panel.

The activation command is sent from the control panel to the voice annunciator through the **VW2W100** Vega wire to wireless translator interface module and other possible **SGWE100** wireless expander modules.

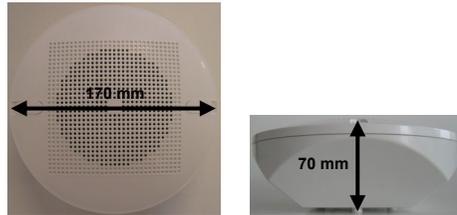
Communication between the **SGVA100** and the **VW2W100** / **SGWE100** modules is obtained via the "Sagittarius" wireless, analogue-intelligent bidirectional protocol. Radio communication meets European standard EN 54-25.

Up to 3 voice messages can be recorded and/or chosen on a single **SGVA100**, each having a maximum duration of 32 seconds.

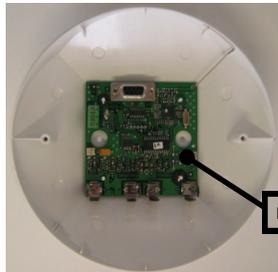
GENERAL OVERVIEW



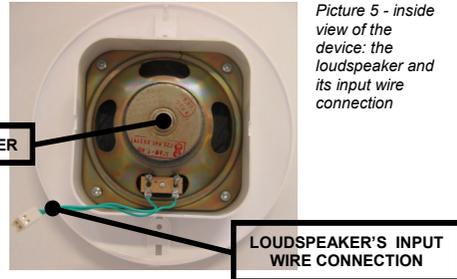
Picture 1 - SGVA100 overview



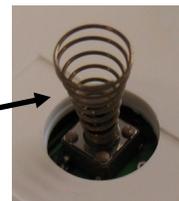
Picture 2 & 3 - SGVA100 dimensions



Picture 4 - inside view of the device: the back box and PCB



Picture 5 - inside view of the device: the loudspeaker and its input wire connection



Picture 6 - rear view of the SGVA100 and tamper switch spring detail

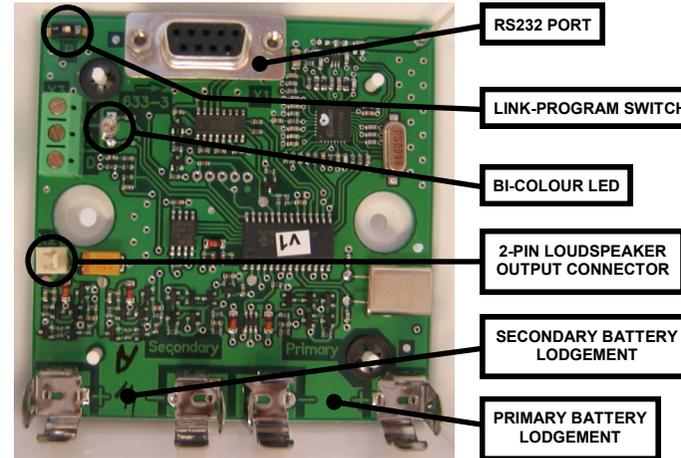
TECHNICAL SPECIFICATIONS

Operating frequency range	868.15 MHz - 869.85 MHz
Radiated power range (typical)	5 dBm (3 mW)
Radio signal's modulation type	FSK
Operating frequency channels	7
Communication range with VW2W100 or SGWE100 *	200 m (in open space)
Main battery type	CR123A (3.0V & 1.2 Ah)
Secondary battery type	CR123A (3.0V & 1.2 Ah)
Main battery lifespan **	5 years typical ***
Secondary battery lifespan **	2 months typical ***
Voice's output at 1m distance	from 70 to 110 dB
Nominal output power	not less than 0.75 Watts
Temperature range	from -10°C to +55°C
Tolerated humidity range (no condensing)	from 5% RH to 90% RH
Dimensions	170 mm diameter; 70 mm height
Weight	410 g

* Ideal operating range: may vary consistently according to environmental conditions.

** When a low battery condition is indicated, both, main and secondary, batteries must be changed altogether.

*** These lifespan values refer to the device being programmed with a control signals transmission period of 12 seconds. If the SGVA100 is activated for 30 seconds a week for test, the primary battery's lifespan reduces to 3 years.



Picture 7 - PCB overview

WARNINGS AND LIMITATIONS

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that this device is only used with compatible control panels.

Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

Smoke sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Sensors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions.

Refer to and follow national codes of practice and other internationally recognized fire engineering standards. Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

WARRANTY

All devices are supplied with the benefit of a limited 3 year warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product.

This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage. Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified.

Full details on our warranty and product's returns policy can be obtained upon request.

NORMATIVE COMPLIANCES

EN 54-25:2008

TECHNICAL SPECIFICATIONS REFERENCE

For more information, the technical specifications document for this product, TDS-SGVAX, can be obtained directly from the manufacturer.

VISUAL LED INDICATOR

The **SGVA100** is equipped with a bicolour LED (red/green) that provides visual indication for functional conditions and battery levels as indicated in table 2.

SGVA100 status	Green LED	Red LED
Power up	1 second green, then 0.5 second red for 4 times	
Programming and linking to the system	Blinking until linking and programming is completed	
Voice message's PC programming mode	-	Continuously on
Normal condition	-	-
Main battery fault	-	0.1 second on and 5 seconds off
Secondary battery fault	0.1 second on and 5 seconds off	-
Both batteries fault	Sequential bicolor blinking (0.1 second on / 5 seconds off)	

Table 2

DEVICE'S POWER SUPPLY AND LINKING

The linking operation permits the configuration of the **SGVA100** on the wireless system. The linking operation described below does not change if made directly from the **VW2W100** translator module's interface or from the Wirelex PC configuration program.

- 1) Move the "Link-program" switch to position ON (picture 8).



Picture 8 - "Link-program" switch: ON position

- 2) Insert the primary battery into its housing; the visual LED indicator switches on accordingly (see "Power up" in table 2 and picture 9). **Be sure to insert the primary battery first!!!**



Picture 9 - the primary battery inserted

- 3) Insert the secondary battery (picture 10).

Ensure that both battery's polarity are correct!!!



Picture 10 - primary and secondary batteries inserted

- 4) When the **VW2W100** (by itself or piloted by the Wirelex) is searching for a new device for linking, move the "Link-program" switch to position 1 in order to initiate communication with the translator module (picture 11); the visual LED indicator switches on accordingly (see "Programming and linking to the system" in table 2).

IMPORTANT NOTE!

Programming is considered to be completed successfully only if there is an indication of programming success on the **VW2W100** or on the window of the Wirelex program.

*If the linking and programming operation fails, check if mistakes were made with the **VW2W100** or the Wirelex, remove the batteries, commutate alternatively the ON / 1 switch a few times in order to discharge the internal capacitor and then start again from point 1) re-performing the linking procedure.*



Picture 11 - "Link-program" switch: 1 position

COMMUNICATION QUALITY ASSESSMENT

It is possible to assess the wireless communication quality between the **SGVA100** and the **VW2W100** / **SGWE100** by using a testing feature built in the device.

After a successful linking operation, by commuting the "Link-programming" switch on the ON position, the device's LED will start blinking according to table 3.

Always remember to reposition the switch to 1 after the assessment operation: device will NOT work operatively while the switch is commuted on the ON position.

Communication quality	Assessment	Device's indication
No connection	Fail	Two red blinks
Link margin is less than 10 dB	Poor	One red blink
Robust communication with link margin from 10 dB to 20 dB	Good	One green blink
Robust communication with link margin over 20 dB	Excellent	Two green blinks

Table 3

OUTPUT VOICE'S PROGRAMMING

It is possible to program into the **SGVA100** the output voices that will be played when activated by the control panel during certain events. To do so is necessary to connect a personal computer to the RS232 connection port through a serial cable and use the Wirelex configuration program's specific function, implemented to perform such task. When connected, the visual LED indicator will lit according to table 2, "Voice message's PC programming mode". Consult the Wirelex program's manual to have more information about the procedure that must be used to perform such operation.

DEVICE'S PLACEMENT

For specific information regarding detector and device's spacing, placement and special applications refer to your specific national standards.

It is strongly advised to mount the device as far as possible from metal objects, metal doors, metal window openings, etc. as well as cable conductors, cables (especially from computers), otherwise the operating distance may greatly drop. The device should not be installed near electronic devices and computer equipment that can interfere with the reception's quality.

- 1) Select the position of the **SGVA100** before installing and fixing it. **Verify, from that position, that the communication between the device and the **VW2W100** / **SGWE100** is correctly established and working (see the COMMUNICATION QUALITY ASSESSMENT paragraph).**

- 2) Install and fix the device's back box in the selected position, with the provided screws (picture 12).



Picture 12 - screw insertion holes

- 3) Connect the loudspeaker's input wire connection to the PCB's 2-pin output connector.
- 4) Insert and screw the front part of the device, containing the loudspeaker, onto the back box.
- 5) Cover the front screws with the two small plastic elements provided together with the product (picture 13 and 14).



Picture 13 - screw covering elements



Picture 14 - installation of a screw covering element

TAMPER DETECTION FEATURE

The **SGVA100** device is provided with a tamper switch spring on its back, and, if it is removed from the wall, sends a tamper message to the control panel (see picture 6).

BATTERY FAULTS

If a battery fault condition is detected on the **SGVA100**, a fault message is sent to the control panel via **VW2W100 / SGWE100**. This kind of fault condition is locally signaled by the annunciator's visual LED indicator (see table 2).

TESTING

In order to test the functionality of the installed **SGVA100**, the following test must be performed: activate an alarm condition on the control panel (by a call-point or sensor in the installed system); the control panel will transmit an alarm message to the device via **VW2W100 / SGWE100** and activate the annunciator's output.

After each test the device must be reset by the specific command on the control panel or the **VW2W100** (see the RESET paragraph).

If the test fails, check whether the loudspeaker is well connected to the PCB or the batteries are charged; if this is not sufficient, send back the device to your distributor for repair or substitution.

All devices must be tested after installation and, successively, on a periodic basis.

RESET

To reset the **SGVA100** from an alarm or a fault condition, it is necessary to:

- 1) solve the cause of the abnormal condition
- 2) send the reset command from the control panel or from the **VW2W100**.

Performing sequentially those two operations the annunciator's output will be turned off.

MAINTENANCE

- 1) Before starting any maintenance work, isolate and disable the system, in order to avoid accidental and unwanted battery fault or tamper detection conditions.
- 2) Remove the loudspeaker from the back box of the device. Be aware that the loudspeaker can still be connected to the PCB, so act gently and with caution in order not to cause damage to it.
- 3) Perform the planned necessary maintenance operations.
- 4) After the device has been serviced, reinstall correctly the annunciator's loudspeaker element onto its back box, re-apply power to the system and check correct operation as described under the TESTING paragraph.