SP-2

Speech Processor Module

Visonic Ltd

Installation Instructions

1. INTRODUCTION

The SP-2 speech processor is an advanced electronic record/playback module for short voice messages, up to 20 seconds long. It is designed for manual recording and electronically triggered playback. When the SP-2 is used in conjunction with alarm control panels and digital communicators, calls for help due to fire or burglary may be prerecorded, for automatic transmission by telephone or by radio (or both), depending on system configuration. The SP-2 may also be used as an inexpensive, easy-to-install announcer device, triggered by motion detectors or by any type of momentary switch.

A miniature microphone and an easily accessible RECORD pushbutton are included in the SP-2 (as in a common answering machine). Two audio outputs are provided: 600-ohm line terminals and an 8-ohm loudspeaker output.

When triggered by a short pulse, the SP-2 plays the recorded message once and then stops. With continuous triggering, the message is repeated over and over again, until the trigger voltage is removed from the START input. An audio input header permits the installer to choose between recording a message with the internal microphone (INT) and recording a message from an external audio source (EXT).

Since the SP-2 complements existing alarm and public addressing systems, it can be installed within the alarm system's control panel or inside the loudspeaker housing. Operating power

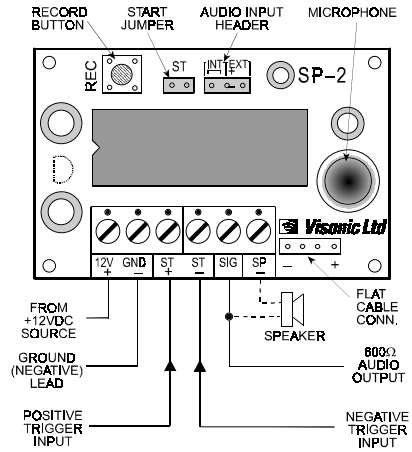

Figure 1. *SP-2 module*

is drawn from the host system or from any external 12VDC supply. Detailed information on various applications is given in the SP-2 Application Notes, available upon request from Visonic Ltd. authorized dealers.

2. SPECIFICATIONS

Maximum Recording Duration: 20 seconds.
Memory Type: EEPROM (no need for battery backup).
Triggering Methods:
Positive voltage applied to the **ST+** terminal.
Negative (ground) potential applied to the **ST-** terminal.
A short circuit imposed across the **ST** pins on the PCB.
Loudspeaker Output: 1.5V p-p/8Ω (across the **SIG** and **SP-** terminals).
Line Output: 1.5V p-p/600Ω (across the **SIG** and **GND-** terminals).
External Audio Input Level: 100 mV p-p maximum
External Audio Input Impedance: 4 kΩ
Nominal Supply Voltage: 12 VDC ±15%
Current Consumption (approx.) : 5 mA (quiescent), 20 mA (record/playback into 600Ω line)
100 mA peak (playback into loudspeaker).
Dimensions: 38 x 58 x 15 mm (1.5 x 2.3 x 0.6 in.)
Weight: 18.5 g (0.65 oz)

3. INSTALLATION

The holes at the 4 corners of the SP-2 printed circuit board serve for mechanical installation. Remember to leave adequate clearance between the foil side of the PCB and any metal surface. For electrical connections, refer to the drawings and proceed as follows:

1. Apply a continuous 12VDC supply to the **12V+** and the **GND-** terminals, observing correct polarity.
2. Connect the playback trigger terminal of the communicator or control panel to any one of the SP-2 start (ST) inputs. This connection must be made in accordance with the type of playback trigger provided by the communicator or the control panel:
   - If the playback trigger is positive, apply it to the voice processor **ST+** terminal.
   - If the playback trigger is ground potential, apply it to the speech processor **ST-** terminal.
   - If the playback trigger is obtained by closure of normally open "floating" relay contacts, connect these contacts across the two **ST** pins located near the REC button. Alternatively, these floating relay contacts may be used for supplying either positive trigger voltage to the **ST+** terminal or ground potential to the **ST-** terminal.
   - If you wish to trigger the SP-2 with a normally closed switch of a PIR motion detector, connect the N.C. switch contacts across the speech processor's **ST+** and **12V(-)** terminals. Then use the jumper provided with the unit to short the two ST pins permanently together (these pins are located near the REC button).
3. Connect the SP-2 **SIG** terminal to the **AUDIO INPUT** terminal of the control panel or digital communicator.
4. To check the recorded message, connect an 8-ohm loudspeaker across the **SIG** and **SP-** terminals of the speech processor.

IMPORTANT NOTICE: *Instructions for connecting the SP-2 Speech Processor module to particular Visonic Ltd. communicators, control panels and long-range radio transmitters are provided in the SP-2 Application Notes (Publication D-6102-9). The application notes also include useful information on triggering methods with N.C. and N.O. sensor contacts, as required in automatic announcer applications.*

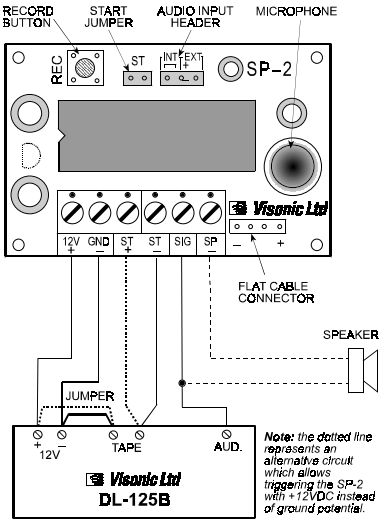

Figure 2. *Interconnection with the Visonic Ltd. DL-125B Digital Dialer*

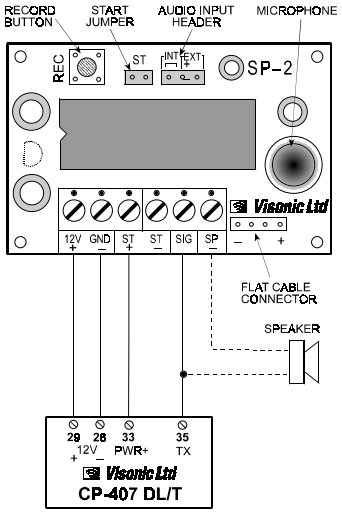

Figure 3. *Interconnection with the Visonic Ltd. CP-407DL/T Control Panel*

4. RECORDING AND TESTING

Note: *Make sure that a jumper is mounted across the two* ***INT*** *pins of the audio input header. If you intend to record from an external audio source, remove the* ***INT*** *jumper and connect the external audio source across the* ***EXT (+)*** *and (-) pins.*

1. Complete all connections as explained in Section 3 and power up the system.
2. Depress and hold down the **REC** button, while speaking at normal voice level about 50 cm (20 in) from the microphone. When through, release the pushbutton. Remember that message duration is limited to 20 seconds.

   Note: *It is advisable to make the recording in a quiet environment. Turn off nearby radio receivers and noisy machines, and ask people in your immediate vicinity to keep silent while you record. If the background noise is too high, speak closer to the microphone.*
3. If you exceed the 20 second limit, the last part of the message will overwrite its first part, making the message incoherent. Initiate playback (see 4 below) and verify that this has not occurred. If the message proves too long, rephrase it to reduce its duration and record again.
4. To initiate playback for testing purposes, momentarily short the two **ST** pins on the PCB together. The message will be played back once. Repetitive playback will result if the pins are kept shorted together.
5. Having checked the recorded message, you may now disconnect the loudspeaker from the speech processor, to prevent the message from being heard at the installation site each time the unit is triggered into playback.

WARRANTY

Visonic Ltd. and/or its subsidiaries and its affiliates ("the Manufacturer") warrants its products hereinafter referred to as "the Product" or "Products" to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period, at its option, to repair or replace the product or any part thereof. The Manufacturer shall not be responsible for dismantling and/or reinstallation charges. To exercise the warranty the product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: *improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the Manufacturer.*

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall not be modified, varied or extended, and the Manufacturer does not authorize any person to act on its behalf in the modification, variation or extension of this warranty. This warranty shall apply to the Product only. All products, accessories or attachments of others used in conjunction with the Product, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer does not represent that its Product may not be compromised and/or circumvented, or that the Product will prevent any death, personal and/or bodily injury and/or damage to property resulting from burglary, robbery, fire or otherwise, or that the Product will in all cases provide adequate warning or protection. User understands that a properly installed and maintained alarm may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function. *However, if the Manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, the Manufacturer's maximum liability shall not in any case exceed the purchase price of the Product, which shall be fixed as liquidated damages and not as a penalty, and shall be the complete and exclusive remedy against the Manufacturer.*

Warning: *The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his /her safety and the protection of his/her property.*

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