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NAPCO®

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MVA-1000
Talking Siren Driver

with special electronic speaker and wiring supervision feature

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DESCRIPTION

The Magnum Voice Alert™ 1000 is a high quality multilingual talking siren driver with separate messages for fire and burglary, with fire having priority. Synthesized voice messages are available in English, Spanish and French, in addition to a dual-tone siren (sweep or steady). The message/siren combination is selectable. Similarly, fire and burglary trip logic levels are selectable to suit the control panel.

This module is compatible with all major control panels, including those equipped with internal siren drivers. The output circuit is provided with both overload and thermal protection. A special electronic tamper supervision feature is provided to monitor the speaker and associated wiring so that attempts to remove the speaker will signal an alarm to the central station.

SPECIFICATIONS

Input Voltage: 12Vdc
Recommended Speakers: 8Ω, 15W or 16Ω 10W, minimum. See page 3 for multiple-speaker arrangements.
Current Drain: 2.3A with 4Ω load:1.3A with 8Ω load; 0.97A with 16Ω load.
Speaker Wire Size: 50 ft or less, #22AWG; up to 150 ft, #18AWG; over 150 ft, #16AWG
Sound Output Level:127dB*

*To increase sound level, use a larger, more efficient speaker.

INSTALLATION

The module mounts inside the enclosure by means of two double-sided adhesive strips (supplied). Select an area within the enclosure that allows easy access to the speaker terminal strip, selector resistors, and jumpers. (Note that in panels where space is restricted, it may be preferable to make selections and complete wiring to the module prior to final mounting.)

Remove the backing from one surface of one of the adhesive strips. Taking care not to touch the adhesive, apply the strip to the solder side of the module along one of the short sides about ½" in from the edge. Press firmly to ensure a secure bond. Similarly, mount the second strip about ½" in from the opposite edge. Then remove the remaining backing and affix the module to the selected area inside the enclosure.

VOICE MESSAGES

Following are each of the synthesized voice messages. Each verbal message is preceded by a 5-second siren and followed by a 15-second siren. See *Message Selection* and Table 1 to select the desired message and/or siren combination.

- **ENGLISH FIRE:**
  "FIRE, FIRE, FIRE; LEAVE IMMEDIATELY!"

- **ENGLISH BURGLARY (See Note below):**
  "BURGLARY, BURGLARY, BURGLARY; YOU HAVE VIOLATED AN AREA PROTECTED BY A SECURITY SYSTEM. LEAVE IMMEDIATELY!"

- **SPANISH FIRE:**
  "FUEGO, FUEGO, FUEGO; SALIR DE INMEDIATO!

- **SPANISH BURGLARY:**
  "ROBO, ROBO, ROBO; ESTA VIOLANDO UNA ZONA PROTEGIDA. SALIR DE INMEDIATO!"

- **FRENCH FIRE:**
  "AU FEU, AU FEU, AU FEU; PARTEZ IMMEDIATEMENT!"

- **FRENCH BURGLARY:**
  "AU VOLEUR, AU VOLEUR, AU VOLEUR; ZONE INTERDIT. PARTEZ IMMEDIATEMENT!"

Note: The following customized Napco burglary message can replace any English-language burglary message for use in Napco systems. See *Message Selection*.

- **NAPCO BURGLARY MESSAGE:**
  "BURGLARY, BURGLARY, BURGLARY; YOU HAVE VIOLATED AN AREA PROTECTED BY A NAPCO SECURITY SYSTEM. LEAVE IMMEDIATELY!"

SETUP

The operation of the module with respect to message selection and control-panel interface is determined by four resistors at the top edge and two jumpers at the left edge of the board. See *Wiring Diagram*.

Message Selection (Resistors A through D).

The desired voice message (refer to *Voice Messages*) and/or siren arrangement is chosen by cutting one or more Resistors A through D (each 1000 ohms; color code: brown, black, red, gold) as indicated in Table 1. Note that Resistor D is used only to select the custom Napco burglary message for use in Napco systems; it is applicable only to English-language burglary messages.
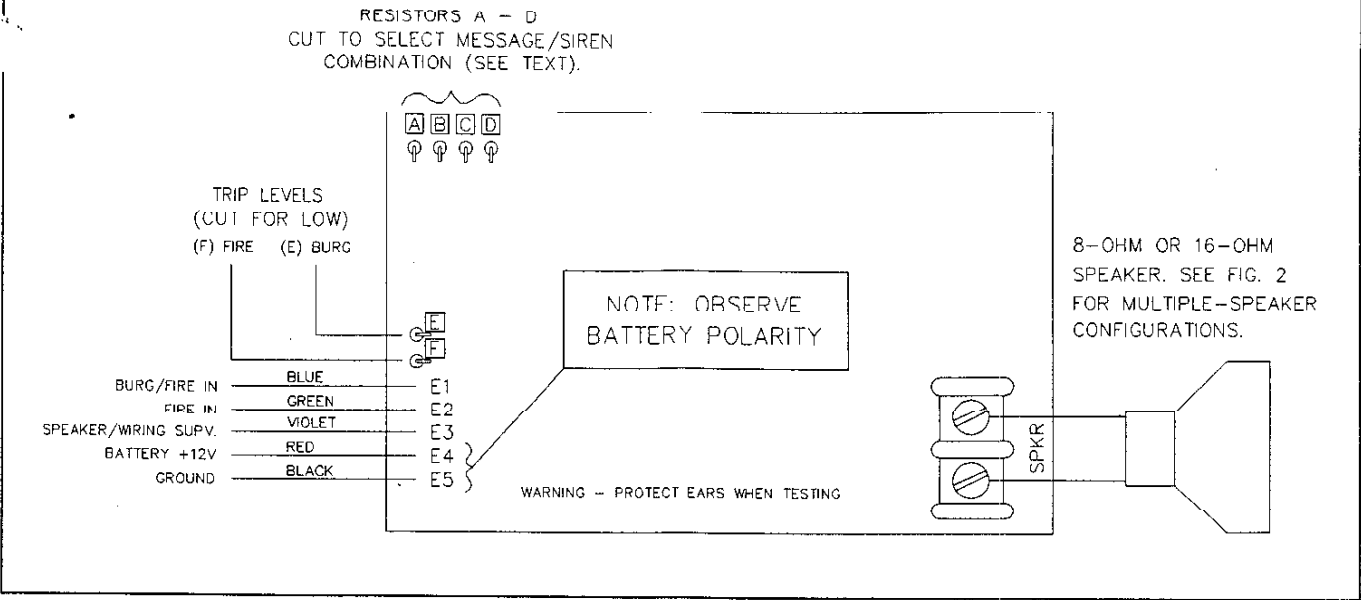
WIRING DIAGRAM

RESISTORS A – D
CUT TO SELECT MESSAGE/SIREN
COMBINATION (SEE TEXT).

A B C D

TRIP LEVELS
(CUT FOR LOW)
(F) FIRE   (E) BURG

8–OHM OR 16–OHM
SPEAKER. SEE FIG. 2
FOR MULTIPLE–SPEAKER
CONFIGURATIONS.

NOTE: OBSERVE
BATTERY POLARITY

BURG/FIRE IN	BLUE	E1
FIRE IN	GREEN	E2
SPEAKER/WIRING SUPV.	VIOLET	E3
BATTERY +12V	RED	E4
GROUND	BLACK	E5

SPKR

WARNING – PROTECT EARS WHEN TESTING

Fig. 1. MVA-1000 Wiring Diagram.

Note: When wiring to a control panel with a built-in siren driver, cut or move the jumper that disables the built-in siren driver and enables the bell output.
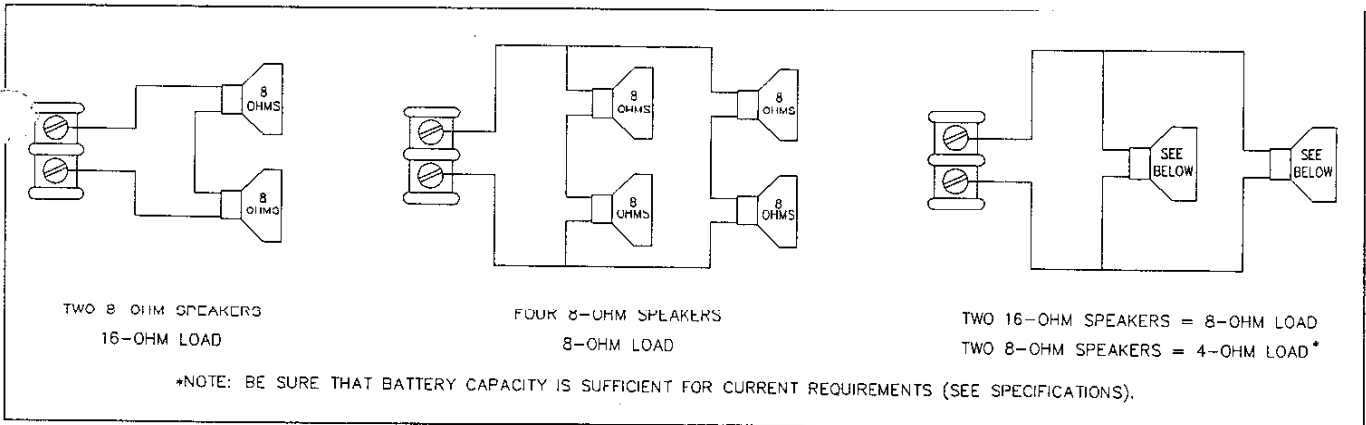
TWO 8 OHM SPEAKERS
16-OHM LOAD

FOUR 8-OHM SPEAKERS
8-OHM LOAD

TWO 16-OHM SPEAKERS = 8-OHM LOAD
TWO 8-OHM SPEAKERS = 4-OHM LOAD*

*NOTE: BE SURE THAT BATTERY CAPACITY IS SUFFICIENT FOR CURRENT REQUIREMENTS (SEE SPECIFICATIONS).

Fig. 2. Multiple-speaker wiring configurations.

Refer to Table 2 for terminal wiring to a variety of control panels. For the panels listed, do *not* cut Jumper E. The module may be connected to most other panels not listed.

For high security applications, outdoor speakers that are vulnerable may be wired with a 1.5A fuse (optional) as shown in Fig. 3. If the exterior speaker is shorted, the fuse will blow, allowing interior speakers to continue to function.
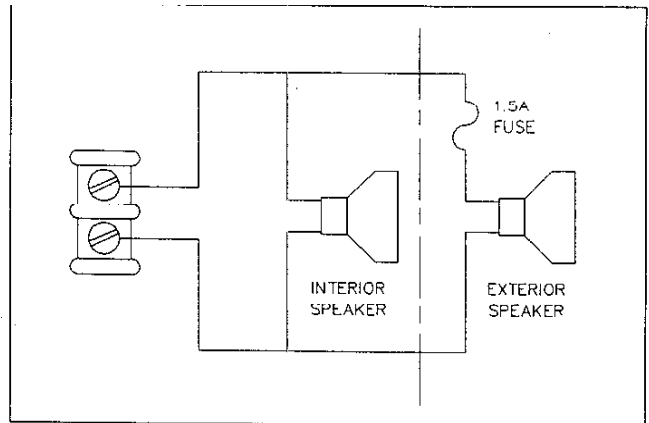
1.5A
FUSE

INTERIOR
SPEAKER

EXTERIOR
SPEAKER

Fig. 3. Fusing an exterior speaker for high-security applications.

3

Resistors				Language(s)	
A	B	C	D	Fire Message	Burglary Message
–	–	–	–*	English	English
–	–	X	–*	Spanish, English	Spanish, English
–	X	–	–*	French, English	French, English
–	X	X	–*	English, Spanish, French	English, Spanish, French
X	–	–	–	Siren Only	Siren Only
X	–	X	–	Spanish, English	Siren Only
X	X	–	–	French, English	Siren Only
X	X	X	–	English	Siren Only
*Cut for "Napco" English burglary message (see previous text).					

Table 1. Message/siren resistors. "X" denotes resistor cut.

Trip Levels

Burglary Trip Level (Jumper E). The burglary message may be tripped by either a *steady* logic high or a *steady* logic low, as provided by the panel (see panel instructions or *Trip Level Unknown*, which follows). With Jumper E intact, activation is by a logic high (12V). Cut Jumper E for activation by a logic low (0V). Note that a *pulsing* high or low (pulse width .25 to 1.75 seconds, as provided by many control panels) at the BURG/FIRE input E1 will be interpreted as a fire and will produce the fire message.

Fire Trip Level (Jumper F). Similarly, the fire message may be tripped by either a logic high or a logic low. With Jumper F intact, activation is by a logic high (12V); cut for activation by a logic low (0V). Do not pulse this input.

Trip Level Unknown. If the panel is not listed in Table 2 and the instructions are not available, in most cases the module may be wired to the panel with the aid of a voltmeter capable of measuring 12Vdc. Proceed as follows.

1. Connect the positive (+) meter lead to the terminal designated for *Alarm Output* and the negative (–) lead to panel ground. If, *before* initiating a burglary alarm, the Alarm Output terminal measures 0V, do *not* cut Jumper E.

If the Alarm Output terminal measures 12V, cut Jumper E.

2. *Only for panels with a separate Fire Output:* Connect the voltmeter positive (+) lead to the terminal designated for *Fire Alarm Output* and the negative lead to panel ground. If, *before* initiating a fire alarm, the Fire Alarm Output terminal measures 0V, do *not* cut Jumper F. If the Fire Alarm Output terminal measures 12V, cut Jumper F.

WIRING

Referring to the *Wiring Diagram* in Fig. 1, complete wire and terminal connections to the control panel as follows:

BLUE (BURG/FIRE) – Connect to the panel Burglary (steady) Output. This wire may also be used to trip the fire message if the panel provides a pulsing fire output (reprogramming may be required). In this case, do not connect the following green wire.

GREEN (FIRE) – Connect to the panel output designated as the Fire (steady) Output (unless blue wire is used).

VIOLET (SPEAKER/WIRING SUPERVISION) – Connect to a 24-hour zone activated by a short for supervision of speaker and associated wiring. Removing the speaker or shorting either speaker terminal to ground will appear as a short on the zone. Note that in series-strung multiple-speaker systems, cutting any speaker will trip the panel's supervision zone. In parallel-strung systems, each branch must be cut before the panel's supervision zone will trip.

Caution: If using an MA1008e or MA1016e control panel in a system utilizing the R1000 wireless receiver, speaker/wiring supervision may not be used on Zone 5 (in the MA1008e) or Zone 13 (in the MA1016e). Connect the violet wire to any other available zone.

RED (+12V) – Connect to the backup battery (+).

BLACK (GROUND) – Connect to panel ground.

SPEAKER TERMINALS – Connect an 8-ohm or 16-ohm speaker. See Fig. 2 for multiple-speaker configurations.

CONTROL PANEL MFR. & MODEL[1]	MVA-1000				
	BLUE WIRE	GREEN WIRE	BLACK WIRE	RED WIRE	JUMPER F
NAPCO MA800	29	NOT USED	30	BATTERY (+)	DO NOT CUT
NAPCO MA825/HS	32		28		
NAPCO MA850	33		30		
NAPCO MA854	26		25		
NAPCO MA900	42		37		
NAPCO MA1008[2]	23	LUG E9	24		CUT
NAPCO MA1008e, Ver. 1[3]	4	NOT USED	5		DO NOT CUT
NAPCO MA1008e, Ver. 2[3]	3	NOT USED	6		DO NOT CUT
NAPCO MA1010[4]	39	LUG E9	37		CUT
NAPCO MA1016	39	NOT USED	37		DO NOT CUT
NAPCO MA2600	48		43		
NAPCO MA3000	5	8	16		
ALARM LOCK EGL4700/4700DL	21	NOT USED	22	BATTERY (+)	DO NOT CUT
ALARM LOCK EGL6000	8		7		
ALARM LOCK EGL8000	23		24		

Table 2. MVA-1000 connections to various control panels.

NOTES: (1) If installing module into a panel with a built-in siren driver, cut the jumper that disables the siren and enables the bell output. (2) Program audible burglary zones for BURGLARY/FIRE OUTPUT; do not program PULSING FIRE OUTPUT; program times for B/F OUT TIME-OUT and FIRE TIME-OUT. (3) Version 2 has SPEAKER (+) on Terminal 3 and AUX (–) on Terminal 6. (4) Cut Jumper E on control panel. Program audible burglary zones for BURGLARY OUTPUT; do not program PULSING FIRE OUTPUT; program times for BURG. TIME-OUT and FIRE TIME-OUT.
- For help in connecting this module to any panel, call Technical Service (Toll Free): 1 (800) 645-9440.
- For a chart showing connections to other panels, call Customer Service (Toll Free): 1 (800) 645-9445 and request a copy of Specification Sheet A304.

NAPCO LIMITED WARRANTY

NAPCO SECURITY SYSTEMS, INC. (NAPCO) warrants its products to be free from manufacturing defects in materials and workmanship for fifteen months following the date of manufacture. NAPCO will, within said period, at its option, repair or replace any product failing to operate correctly without charge to the original purchaser or user.

This warranty shall not apply to any equipment, or any part thereof, which has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to acts of God, or on which any serial numbers have been altered, defaced or removed. Seller will not be responsible for any dismantling or reinstallation charges.

In case of defect, contact the security professional who installed and maintains your security system. NAPCO shall have no obligation under this warranty, or otherwise, if the product has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to accident, nuisance, flood, fire or acts of God, or on which any serial numbers have been altered, defaced or removed. NAPCO will not be responsible for any dismantling, reassembly or reinstallation charges.

In order to exercise the warranty, the product must be returned by the security professional, shipping costs prepaid and insured to NAPCO. After repair or replacement, NAPCO assumes the cost of returning products under warranty.

There are no warranties, express or implied, which extend beyond the description on the face hereof. There is no express or implied warranty of merchantability or a warranty of fitness for a particular purpose. Additionally, this warranty is in lieu of all other obligations or liabilities on the part of NAPCO.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within the six months following the end of the warranty period. In no case shall NAPCO be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, even if the loss or damage is caused by the seller's own negligence or fault.

This warranty contains the entire warranty. It is the sole warranty and any prior agreements or representations, whether oral or written, are either merged herein or are expressly cancelled. NAPCO neither assumes, nor authorizes any other person purporting to act on its behalf to modify, to change, or to assume for it, any other warranty or liability concerning its products.

In no event shall NAPCO be liable for an amount in excess of NAPCO's original selling price of the product, for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of any failure of the product. Seller's warranty, as hereinabove set forth, shall not be enlarged, diminished or affected by and no obligation or liability shall arise or grow out of Seller's rendering of technical advice or service in connection with Buyer's order of the goods furnished hereunder.

NAPCO RECOMMENDS THAT THE ENTIRE SYSTEM BE COMPLETELY TESTED WEEKLY.

Warning: Despite frequent testing, and due to, but not limited to, any or all of the following; criminal tampering, electrical or communications disruption, it is possible for the system to fail to perform as expected. NAPCO does not represent that the product/system may not be compromised or circumvented; or that the product or system will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; nor that the product or system will in all cases provide adequate warning or protection. A properly installed and maintained alarm may only reduce risk of burglary, robbery, fire or otherwise but it is not insurance or a guarantee that these events will not occur. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. Therefore, the installer should in turn advise the consumer to take any and all precautions for his or her safety including, but not limited to, fleeing the premises and calling police or fire department, in order to mitigate the possibilities of harm and/or damage.

NAPCO is not an insurer of either the property or safety of the user's family or employees, and limits its liability for any loss or damage including incidental or consequential damages to NAPCO's original selling price of the product regardless of the cause of such loss or damage. If the user wishes to protect itself to a greater extent, NAPCO will, at user's sole cost and expense, obtain an insurance policy to protect the user, supplemental to user's own policy, at a premium to be determined by NAPCO's insurer upon written notice from user by Certified Mail, Return Receipt Requested, to NAPCO's home office address, and upon payment of the annual premium cost by user.

Some states do not allow limitations on how long an implied Warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, or differentiate in their treatment of limitations of liability for ordinary or gross negligence, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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