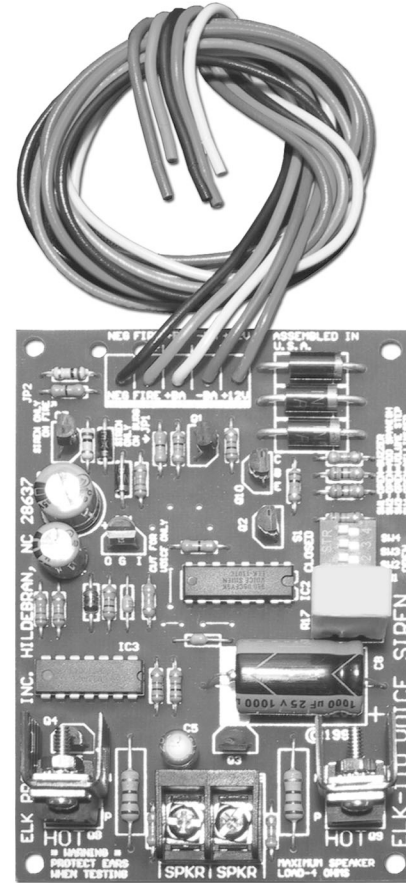


Voice Siren Driver Module

ELK-110

The ELK-110 Voice “Talking” Driver features high quality digitally pre-recorded voice messages and loud attention getting siren sounds in an economical, low current draw, compact package. It features two input channels, bilingual voices (English and Spanish), temporal coding on the bell sound, and many unique options which allow it to be used with virtually any residential or commercial alarm installation. The voice messages and the siren alternately sound whenever one of the channels are activated.

The ELK-110 may be customized by use of on-board jumpers. For example: our *MilliMiser™* option allows the already low current draw of the ELK-110 to be reduced even lower. This is ideal for controls with limited alarm output power. The *ComboTrigger™* option allows controls which have a single alarm output and pulsing option to activate both the burglar and fire alarm sounds. The *VolumeStep™* option is best described as the “peacekeeper”, since it causes the siren sound to start at low volume, gradually increasing over 90 seconds to maximum volume. Also available is the ELK-55, a self contained voice siren.



Features

- Installer Friendly - Compact & Easy to Mount.
- Two Input Channels, Burglar & Fire.
- Bilingual Voice - *English and or Spanish*, Siren Only, Speech Only, or Combined.
- *MilliMiser™* Lowers Current Draw.
- *ComboTrigger™* For Single Outputs.
- *VolumeStep™* Slowly Increases Siren Volume.
- Temporal Coded Fire Signal.
- Pre-Wired For Easy Installation.
- Lifetime Limited Warranty.

Specifications

- Operating Voltage: 10 to 14 Volts D.C.
- Current Draw: 1.25 Amps (800mA on MilliMiser™ setting) with one 8 Ohm speaker.
- Sound Level: 120 dB @ 1 meter, 14 Volts D.C., with one 8 Ohm speaker.
- Max. Speaker Load: 4 Ohms.
- Size: 2.75" x 4.0" (70mm x 102mm).

Features and Specifications subject to change without notice.

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ELK
PRODUCTS, INC.

Instructions

ELK-110

OVERVIEW

The ELK-110 offers high quality pre-recorded voice messages and 3 alarm sounds, warble siren, pulsing buzzer, and temporal coded bell. It features two (2) input channels, one for Burglary, and one for Fire. The alarm sounds and voice messages alternate for each channel. DIP switches and jumpers provide many unique options. It is possible to select voice only, siren only, or combined alternating playback.

CHANNEL INPUTS

BURGLARY (BA) The ELK-110 features a positive (+) input trip for Burg **+BA** as well as a negative (-) input trip **-BA**, making it compatible with most controls. On controls that have a single alarm output with a pulsing option for Fire, both the **+BA** and **-BA** inputs provide **ComboTrigger™**, which automatically switches from Burg to Fire if either input is activated with a .5 to 1.5 second pulsing voltage.

FIRE (FA) This channel has a (+) positive input trip only. NOTE: Fire may also be tripped by applying a pulsing input to the **+BA** or **-BA** (Burglary) inputs. This is ideal for controls having only a single alarm output with a pulsing Fire option.

VOICE MESSAGES

Voice messages are spoken in English, Spanish/English, or Spanish only, depending upon the switch and jumper settings. (See "Switch & Jumper Options"). Each channel has an initial cycle, followed by a repeating cycle.

BA (Burglar) English:

Initial: *3 Sec. Tone, Intruder, intruder, leave immediately.*
 Followed by warble or pulsing buzzer sound.
 Repeat: "Intruder, intruder, leave immediately"
 Followed by warble or pulsing buzzer sound.

FA (Fire) English:

Initial: *Fire, fire, leave immediately*
 Followed by a Temporal Coded Bell sound.
 Repeat: *Fire, fire, leave immediately*
 Followed by a Temporal Coded Bell sound.

BA (Burglar) Spanish:

Initial: *3 Sec. Tone, Intruso, intruso*
 Followed by warble or pulsing buzzer sound.
 Repeat: *Intruso, intruso*
 Followed by warble or pulsing buzzer sound.

FA (Fire) Spanish:

Initial: *Incendio, incendio*
 Followed by a Temporal Coded Bell sound.
 Repeat: *Incendio, incendio*
 Followed by a Temporal Coded Bell sound.

PULSING BA INPUT: (Same for Spanish or English)

Initial: *3 Sec. Tone, Fire, fire, leave immediately*
 Followed by a Temporal Coded Bell sound.
 Repeat: *Fire, fire, leave immediately.*
 Followed by a Temporal Coded Bell sound.

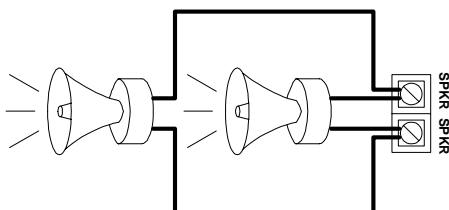
Switch & Jumper Options:

- SW1 Closed = Warble Siren Sound.
Open = Pulsing Buzzer Sound.
 - SW2 Closed = English Only.
Open = Spanish and English. (See Notes below)
 - SW3 Closed = Full Volume
Open = Volume Step Feature. Siren starts at low volume and steps to full volume in 90 seconds.
 - SW4 Closed = Full Current.
Open = *MilliMiser™* Low Current Draw. Reduces current draw by approx. 25% with only 8-10% less volume. Great for controls that have limited alarm current.
 - JP1 Siren Only On Burg. Cutting this jumper deletes the voice message on the BA Burglar channel input. **Note: Disables ComboTrigger**
 - JP2 Siren Only On Fire. Cutting this jumper deletes the voice and Temporal Coded Bell sound on the Fire channel input, leaving a buzzer or warble. **Note: ComboTrigger on +BA or -BA will still play the "Fire" message and Temporal Coded Bell.**
 - JP3 Voice Only. Cutting this jumper deletes the siren and Temporal Coded Bell sounds from both the Burglar and Fire channels.
- Note:** For Spanish Only, cut the foil jumper marked "Cut Spanish Only" located on the back of the circuit board and then open switch SW2.

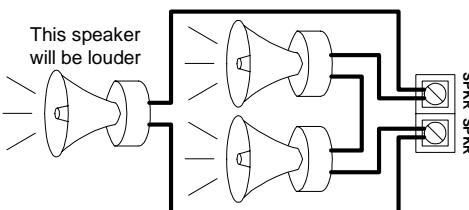
ELK-110 Speaker Resistance & Current Draw

Number of Speakers	Wired in Series or Parallel	Total Resistance	Nominal Current Draw	MilliMiser Current Draw
1	---	8 Ohms	1.2 Amps	800 mA
2	Parallel	4 Ohms	2.1 Amps	1.5 Amps
2	Series	16 Ohms	700 mA	600 mA
3	2 Series, 1 Parallel	6 Ohms	1.7 Amps	1.2 Amps

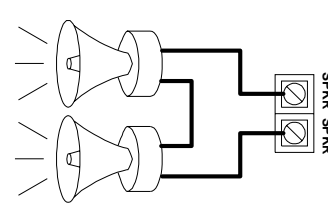
Two 8 Ohm Speakers in Parallel
(4 ohm load)



Two 8 Ohm Speakers in Series, One in Parallel
(6 ohm load)



Two 8 Ohm Speakers in Series
(16 ohm load)



ELK-110 INSTALLATION INSTRUCTIONS

NEG: Connect this wire to a common negative (-) terminal on the control panel or power source.

FIRE: Connect this wire to a positive (+) 12 Volts D.C. Fire alarm output that is rated and fused for 2 Amps or greater.

NOTE: The **Fire** and **+BA** inputs draw the maximum current unless the **+12V** wire is connected as explained below.

+ BA (BURG): Connect this wire to a positive (+) 12 Volts D.C. Burglar alarm output that is rated and fused for 2 Amps or greater. Pulsing this input on/off in 1/2 to 1 second intervals will activate the Fire message and sound, provided the **+12V** wire is connected to a constant (+) 12 Volts D.C. source and Jumper JP1 is not cut.

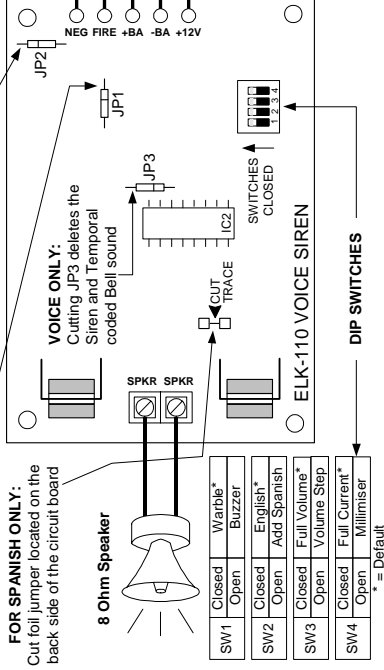
- BA (BURG): For controls that provide a switched negative (-) Burglar alarm output (DSC and others), connect this wire to the negative (-) Bell output terminal, connect **+12V** wire to the positive (+) Bell output terminal, and connect **NEG** wire to any one of the constant negative (-) terminals on the control. **NO OTHER CONNECTIONS ARE REQUIRED!** With these 3 connections, the Fire channel may also be activated by pulsing the **-BA (BURG)** input on/off in .5 to 1.5 second intervals.

+12V: To use the pulsing Combo Trigger feature, or to activate the **+BA (BURG)** or **FIRE** inputs from low current triggers (5 to 40 milliamps, greater than 7 Volts D.C.), connect this optional wire to a positive (+) 12 Volts D.C. 24hr auxiliary source rated and fused for 2 Amps or greater. This wire powers the board constantly and supplies the main operating current. If the control doesn't have an auxiliary output rated 2 Amps or greater, one option is to connect this wire directly to the standby battery using a 2 Amp in-line fuse & holder for safety.

SPKR: Connect one or more 8 ohm speakers in parallel or series, making certain that the combined resistance is not less than 4 Ohms. The alarm output should be fused at 3 amps maximum for short circuit protection.

SIREN ONLY ON BURG: Cutting JP1 deletes the "intruder" message on the +BA or -BA (Burg) inputs. Note: This also deletes the Combo Trigger feature which is the detection of pulsing voltages.

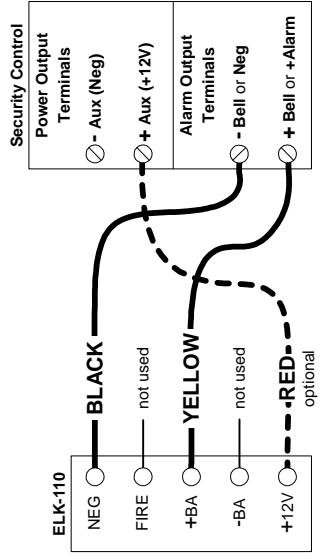
SIREN ONLY ON FIRE: Cutting JP2 deletes the "Fire" message on the FIRE input. The Temporal Coded Bell sound changes to a siren. Note: Combo Trigger on +BA or -BA will still play the "Fire" message and Temporal Coded Bell.



Hookup to a Switched Positive (+) Alarm Output

i.e. Caddx, Napco, Ademco

A constant positive voltage from the alarm output (+Bell) to Yellow Wire(+BA) input will play the burglar message, while a pulsing positive voltage will play the fire message. (Pulsing requires connection of RED wire to +12 Volts D.C.)



Hookup to a Switched Negative (-) Alarm Output

i.e. DSC 832

A constant alarm output (pull to ground Neg) from -Bell to the Blue Wire(-BA) input will play the burglar message, while a pulsing output will play the fire message. Requires connection of RED wire to +Bell or +Aux @ 2 Amps Min.

