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M1 Cross Platform Control

M1G	Full Featured Security & Automation Control
M1KP	LCD Keypad, 2 x 16 Character, backlighted
M1XIN	16 Zone (input) expander. Up to 12 per sys.
M1XOVR	16 Output expander. 8 voltage/8 Relays
M1RB	8 relay board for use w/Ctrl, XOVR, or XOV
M1DBH	Data Bus wiring hub for multiple homeruns
M1XEP	Ethernet port expander/interface
M1XSP	Serial port expander for additional serial ports.

Rust Free Sirens / Speakers

1RT	Speaker & Stainless Steel Enclosure
150RT	Siren & Stainless Steel Enclosure

Speakers & Sirens

44	Speaker, 30 W,8 Ohm Compact Horn
45	Siren, Compact Horn, 118db
M120	Siren, 107db, Mini Horn
SP15	Speaker, 15 watt, Small Horn
SP30	Speaker, 30 watt, Horn
SP35	Speaker, 20 watt, Interior
SP40	Speaker, 40 watt, Horn
SS15	Siren, Dual Tone, 110db, Horn
SS30	Siren, Dual Tone, 120db, Horn
SS36	Siren, Dual Tone, 105db, Interior

ECHO™ Sirens & Speakers

73	ECHO Speaker, 20 Watt, Interior
74	ECHO Dual Tone Siren, Interior

Siren & Voice Drivers

100	High Performance Siren Driver
110	Voice Siren Driver, English & Spanish
120	Recordable Voice Module and Siren
124	Recordable Voice Module, 4 Channels

Surge Suppressors

950	Surge Suppressor, Phone & Power Line
951	Surge Suppressor, Phone - Single Line
952	Surge Suppressor, Phone - Inline Modular
955	Surge Suppressor, Phone - Dual Line

Relay Modules

912	Compact Relay,12 Vdc, SPDT
912B	Heavy Duty Compact Relay,12/24 Vdc, SPDT
924	Sensitive Relay, 12/24 Vdc, DPDT
941	Alarm Output Director
960	Delay Timer Relay, 1 sec. to 60 min.

Power Products

1250	Battery, Lead Acid, 12v, 5Ah
1280	Battery, Lead Acid, 12v, 8Ah
P112	12 Volts DC, 1 Amp Power Supply w/Enclosure
P124	24 Volts DC, 800mA Power Supply w/Enclosure
P1216	12 Volts DC, 1.5 Amp Power Supply
P412	12 Volts DC, 4 Amp Power Supply
P624	Power Supply & Battery Charger
965	Low Battery Cutoff and Power Switch
TRG1640	Transformer, 16.5VAC @ 45 VA
TRG2440	Transformer, 24VAC @ 40 VA

Accessories

129	Computer Sound Card Interface
800	Audio Amplifier, 10 Watts
900-2	"B" Connectors,Unfilled,500 pcs
902-2	"B" Connectors,Gel filled,500 pcs
999	Double Sided Tape
SL1	Strobe Light, 4 colors available
WK1	Wall Mount Kit for SL1 Strobes

For more information contact your local Distributor or:
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Alarm Output Director
ELK-941

APPLICATION:

The **ELK-941** separates the steady or pulsing voltage from a single alarm output and directs this into two (2) different relay outputs. An optional jumper configures Relay 2 to pulse in a temporal-code pattern which meets **ANSI Standard S3.41**. The input trigger can be either positive or negative (pull to ground).

FEATURES:

- Separates Steady and Pulsing Voltage From a Single Alarm Output and Directs This Into Two (2) Different Relay Outputs
- Positive or Negative Low Current Trigger
- Two (2) SPDT Relay Outputs
- Ideal For Two (2) Channel Long Range Radio or Cellular Transmitters
- Option For Temporal Pulse On Relay 2
  Meets ANSI S3.41 Audible Emergency Evacuation Signals 3-Pulse Pattern
- Low Current Output During Delay Time
- LED Indication of Relay Status

Alarm Output Director

ELK-941

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SPECIFICATIONS:

- Operating Voltage: 12 Volts D.C.
- Input Trigger Voltage: 9 - 14 Volts D.C.
- Input Trigger Current: 15 mA
- Max. Current: 96mA (both relays on).
- Relay Contact Rating: 7A @ 30VDC
- Valid Pulse Width: .1 - 4 sec. (.125-5Hz)
- Size: 4.4" x 3" x 1.15"

Features or Specifications subject to change without notice.

Instructions Printed On Inside

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OVERVIEW

The **ELK-941** separates the steady and pulsing voltage from a single alarm output and directs this into two (2) different relay outputs. Steady and pulsing voltage logic is available from most controls that provide only a single alarm output. The relays on the **ELK-941** are activated according to the trigger input, following a 3 to 4 second verification time delay. Relay 1 will activate if a steady input is verified, or Relay 2 will activate if a pulsing input is verified.

INPUT CONNECTIONS

[+12V] Connect to the positive (+) side of a 12 Volts D.C. power source. Nominal operating range is 9 to 14 Volts D.C.

[- GND] Connect to the negative (-) side of a 12 Volts D.C. power source.

[TRG] A positive 9 to 14 Volts D.C. input or a neg. (pull to ground) to this terminal will activate the ELK-941. **The polarity of the trigger voltage must be selected using jumper J3.** The input trigger can be from a contol panel's single alarm output, or from another source such as an automation controller/timer, a simple pushbutton switch, etc.

OUTPUT CONNECTIONS

[-P] "Pre-activation" Output (30mA MAX). This is active immediately following the application of a trigger input for 3 to 4 seconds while the ELK-941 verifies whether the input is steady or pulsing. ***Upon determination of steady or pulse, the appropriate relay will activate and this output will cease.*** Note: If the trigger input is pulsing, this output will also pulse.

[N/O] Relay 1 Normally Open contact. This terminal is connected with the COM terminal whenever the relay is ON (activated).

[COM] Relay 1 Common contact. This "pole" or switching part of the relay is connected to the N/O terminal when the relay is ON (activated), and to the N/C terminal when the relay is OFF (at rest).

[N/C] Relay 1 Normally Closed contact. This terminal is connected with the COM terminal whenever the relay is OFF (at rest).

[N/O] Relay 2 Normally Open contact. This terminal is connected with the COM terminal whenever the relay is ON (activated).

[COM] Relay 2 Common contact. This "pole" or switching part of the relay is connected to the N/O terminal when the relay is ON (activated), and to the N/C terminal when the relay is OFF (at rest).

[N/C] Relay 2 Normally Closed contact. This terminal is connected with the COM terminal whenever the relay is OFF (at rest).

Optional Jumper Descriptions

J1 RELAY MODE

TEMPORAL: In the TEMPORAL position, Relay 2 will be switched on and off in a 3 pulse pattern (3 half-second pulses followed by a 1-1/2 second pause) whenever a pulsing input is detected. This setting has no effect on Relay 1 (it will always be steady).

STEADY: In the STEADY mode, Relay 2 will be steady (solid) when a pulsing input is detected.

IMPORTANT NOTE: With Jumper **J1** in the STEADY position, the **ELK-941** will provide dual mode latch, whereby if a steady input activation is followed by a pulsing input or visa-versa, both relays will activate and stay on until the trigger input is completely removed. If the **ELK-941** is used to activate a long range radio or other communications device, this feature prevents restoral signals from being transmitted until both conditions are resolved.

J2 IMMEDIATE OUTPUT

When an input trigger is first applied, the **ELK-941** requires a 3 to 4 second verification time delay to determine if the input is steady or pulsing. If a siren is connected, it may be desirable to immediately activate one of the relays during this delay time. Such uses include closing ring-back, siren test upon arming, etc. Jumper **J2** selects which relay will activate (if any) during this time. If Relay 1 or 2 is selected for immediate output, the selected relay will "follow" the trigger. ie: If the trigger is steady, the relay will be steady. If the input is pulsing, the relay will pulse. Once the **ELK-941** has verified what type of input is being applied, the appropriate relay will then be activated (which may or may not be the same relay that was selected for immediate output).

RELAY 1: With the jumper in this position Relay 1 will turn on during the verification time delay.

RELAY 2: With the jumper in this position Relay 2 will turn on during the verification time delay.

OFF: With the jumper in this position neither Relay will turn on during the verification time delay.

Note: The **-P** terminal can be used to trigger a piezo or other low current device for audible or visual needs. If the trigger input is pulsing, this output will also pulse. The position of jumper **J2** has no effect on the **-P** terminal.

J3 TRG (Trigger Polarity)

This jumper bar is used to set the proper input trigger polarity.

\+ Set **J3** to "+" if the ELK-941 will be triggered by a positive voltage input.

\- Set **J3** to "-" if the ELK-941 will be triggered by a negative (pull to ground).

APPLICATIONS AND WIRING DIAGRAMS

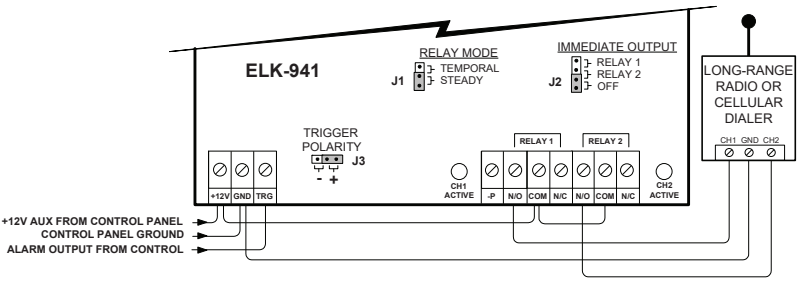
Long-Range Radio or Cellular Transmitter Interface

Jumper Settings

J1 = STEADY - Output of Relay 2 is steady. If both a steady and pulsing input is detected, the dual-mode latch keeps both relays on until input trigger is removed.

J2 = OFF - No Immediate Alarm output from either relay.

J3 = +/- - Depends on polarity of control's alarm output.



As shown, this hookup is used to activate two channels on a long-range radio or cellular transmitter. Relay 1 activates on steady input; Relay 2 activates on pulsing input. Both relays will stay on until trigger input is removed if both a steady and pulsing input is detected. (Dual mode latch)

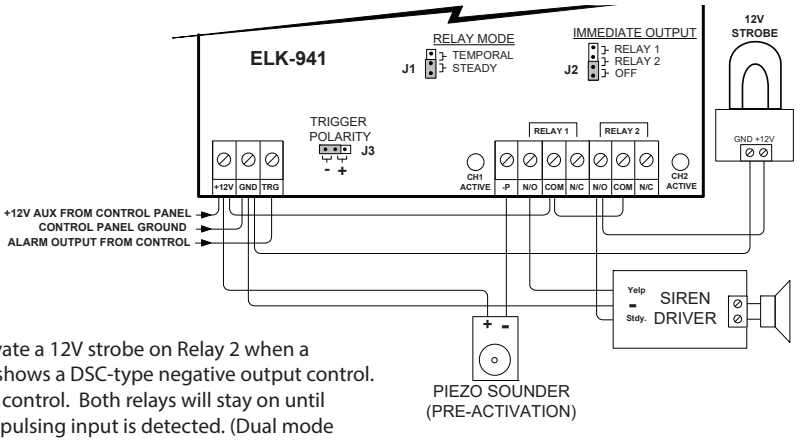
Siren and Strobe Light activation from negative polarity alarm output
Strobe light will only activate if alarm output is pulsing

Jumper Settings

J1 = STEADY - Output of Relay 2 is steady. If both a steady and pulsing input is detected, the dual mode latch keeps both relays on until input trigger is removed.

J2 = OFF - No Immediate Alarm output on either channel.

J3 = "-" - Negative polarity alarm output (DSC type control)



As shown, this hookup is used to activate a 12V strobe on Relay 2 when a pulsing output is detected. Example shows a DSC-type negative output control. Set J3 to "+" if using a positive output control. Both relays will stay on until input is removed if both a steady and pulsing input is detected. (Dual mode latch) Note: The 12V Aux output must be capable of supplying enough current to drive the strobe and the siren driver.

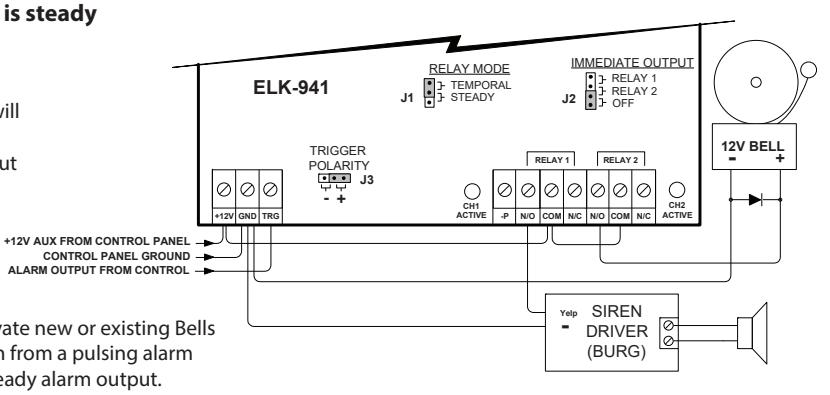
Temporal coded bell from pulsing alarm output,
Siren activation if alarm output is steady

Jumper Settings

J1 = TEMPORAL - Output of Relay 2 will be Temporal 3 pulse pattern.

J2 = OFF - No Immediate Alarm output on either channel.

J3 = +/- - Depends on polarity of control's alarm output.



As shown, this hookup is used to activate new or existing Bells in the ANSI TEMPORAL 3 pulse pattern from a pulsing alarm output and a standard siren from a steady alarm output.

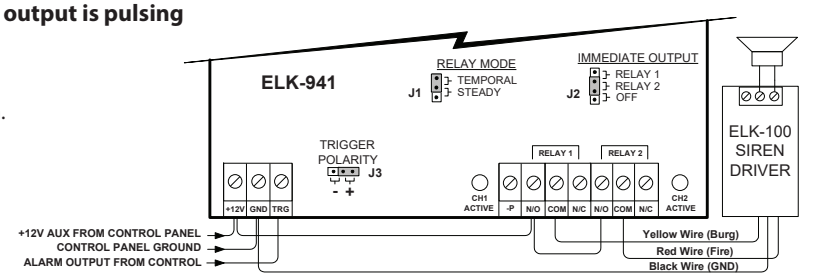
Elk-100 Siren Yelp sound from steady alarm output,
Temporal coded sound if alarm output is pulsing

Jumper Settings

J1 = TEMPORAL - Output of Relay 2 will be Temporal 3 pulse pattern.

J2 = RELAY 2 - Relay 2 will activate immediately upon trigger input and during the 3 to 4 second verification time delay.

J3 = +/- - Depends on polarity of control's alarm output.



As shown, this hookup is used to activate an ELK-100 siren Yelp sound on Relay 1 from a steady alarm output and a Temporal 3 pulse sound on Relay 2 from a pulsing alarm output. Relay 2 will also activate immediately during the 3 to 4 second verification time delay (regardless of a steady or pulsing input trigger). This immediate output feature is good if the control does a siren test at arm or disarm time.