Recordable Voice Module

ELK-124 v3

The ELK-124 is a recordable voice module with 8 record/playback channels and up to 8 minutes of total record time. Voice or music may be recorded making this product ideal for applications such as: telephone on-hold announcements, security or access control warnings, museum narrations, and more. There are two ways to record: 1) With the built-in microphone and push to record button, or 2) With an optional ELK-129 PC Sound Card Interface to transfer .wav files from a PC. Each channel may be triggered via a positive or negative voltage input, or a trigger switch. Sound is delivered through a 24 watt Speaker output as well as a line-level "RCA" jack for use with external amplifiers, audio equipment, or paging systems

Features

- Eight Channels of Recordable Voice and /or Music.
- Maximum record time is 8 minutes which may be divided between the number of channels desired.
- Recordings are stored in non-volatile memory.
- Each channel selectable for "+" or "-" triggering.
- Each channel will accept a momentary trigger.
- Continuous playback or "One Shot" settings.
- Built-in condenser microphone for recording.
- Adjustable speaker volume and current draw.
- Powerful 24 watt audio amplifier for Speakers.
- Line Level Output for Amplifiers and Paging Systems.
- Connector for opt. PC sound card interface [ELK-129]
- Housing in ELK-PB1 plastic enclosure.
- Lifetime Limited Warranty, call for details.

Specifications

- Operating Voltage: 11 to 14 Volts D.C.
- Adjustable current draw: 1/4 to 1.8 Amps (depending on volume setting and speaker load).
- Low current triggers: 6 to 14 Volts D.C. @ 30 mA.
- Maximum sound level: 122 dB @ 1 meter.
- Maximum speaker loading: 4 Ohms.
- Enclosure Size: 6.5" W x 4.375"H x 2"D, White Plastic.

Features and Specificaions subject to change without notice

All 8 channels of the ELK-124 are recordable and can hold up to 1 minute of message each. Two or more channels can be combined into longer messages up to the combined maximum of 8 minutes. The recordings are stored in non-volatile memory and may be re-recorded as needed. Each channel may be activated by a Positive (+11 to 14 Volts DC) or by a Negative (pull to ground) trigger supplied from a control panel or other switched source. Channels are individually jumper selectable for Positive or Negative trigger input source. Voice messages are stored in non-volatile memory and may be re-recorded as needed.

Connections

Power Connections

[+12V] Connect a 12VDC power source to the +12V and NEG terminals.
[NEG] Operating voltage range is 11 to 14VDC, and the max. operating current may reach 1.8 Amps depending on the speaker load and the volume level selected. By connecting the ELK-124 to a full time power source the individual channels may be tripped with either a Pos or Neg input, and the trigger source may be low curren and low voltage.

Channel Trigger Inputs (8 total)

[C1] These inputs are used for activating each of the respective
thru recorded channels. Each input may be jumper selected so that
[C8] the trip input is either a positive or negative. Refer to the Channel Polarity Jumpers located above each terminal.

To trip with a positve voltage set the Channel Polarity jumper to "+" and apply + 12 Volts DC. Make certain that the NEG power connection is connected to the power source.

To trip with a negative voltage set the Channel Polarity jumper to "-" and apply - 12 Volts DC. Make certain that the +12v power connection is connected to the power source.

Speaker Connection

Connect to 1 or more 8 Ohm speakers. WARNING: The Max. combined total load on this output must not exceed 4 Ohms.

Jumper Options

JP1) <u>MIC</u>, for recording with the on board microphone.
<u>PRG</u>, for recording with the ELK-129 computer interface.

JP2) <u>REPEAT</u>, permits the voice channel to repeatedly play for as long as the channel input is activated.
<u>1SHOT</u>, restricts playback of a voice channel to only once per activation cycle. The channel activation must be removed and then re-applied before the message will be allowed to play again.

JP3) <u>ENABLE</u>, enables the record pushbutton switch.
<u>DISABLE</u>, disables the record pushbutton switch and prevents accidental recording.

JP4) <u><60</u>, REC led flashes when 60 secs is reached. This helps prevent messages from accidentally overflowing into the next channel.
<u>>60</u>, enables recording of messages greater than 60 seconds with message recording overflowing into the next channel.

Activating The Voice Channels (Playback)

<u>Continuous (maintained) trigger:</u> Apply a positive (+) 11 to 14 Vdc to terminal **C1** for Channel 1, terminal **C2** for Channel 2, etc. The message will playback for as long as the power is applied, provided Jumper **JP2** ("**1SHOT - REPEAT**") is in the REPEAT position.

<u>Momentary trigger:</u> Connecting terminals **+12V** and **Neg** to a constant (+) 11 to 14 Vdc power source allows channels to playback with a momentary trigger input voltage. Most current is drawn from the constant power source. Current draw from the input triggers will be approximately 30 mA. In the momentary trigger mode each message is played through to the end (one cycle).

Voice Record Time

If jumper **JP4** is in the **<60** position, the maximum record time is 60 seconds per channel. In the **>60** position, messages longer than 60 seconds may be recorded by overflowing the message into the next available channel. When this occurs, the next "overflow" channel cannot be used as a recordable channel. Any attempt to record a message into that next channel will automatically overwrite and destroy the overflow part of the previous channel's message. **Note:** If the maximum record time is reached or exceeded, the red **REC/EOM** LED will start blinking to indicate that recording time has halted.

Volume and Current Adjust

Turning the **Volume** knob clockwise will increase the output volume. The louder the volume, the higher the current draw. The volume and current draw may be adjusted to match the current capability of the power source.

Options for Playback of the Voice Channels

The switches marked "**Manual Triggers**" are provided for programming and for user convenience where manual activation of the channel(s) may be desired. A constant power source must be connected to +12V and NEG terminals in order to use these switches.

Recording Voice Messages

Messages may be recorded from the on-board microphone, or from a PC with a sound card and an ELK-129 interface.

<u>To record from the onboard microphone</u> place Jumper **JP1** in the **MIC** position, **JP2** in the **REPEAT** position, and **JP3** in the **RECORD** position. If the message will be longer than 60 seconds, place **JP4** in the **>60** position. Activate the desired channel either by using the on-board DIP switches(requires power to be connected to +12V and NEG terminals) or by applying +12 Volts DC to the desired input (**C1, thru C8**). The current message (if any) will start to play. While it is playing, press and hold the record switch **SW1** and speak clearly into the on-board microphone. Note that the RECORD/EOM LED should light before you begin speaking. To minimize any noise, gently release **SW1** after speaking. The new message will immediately be played. To stop the playback turn off the channel switch or remove the trigger voltage. To re-record the message, or to record another channel, repeat the above procedure.
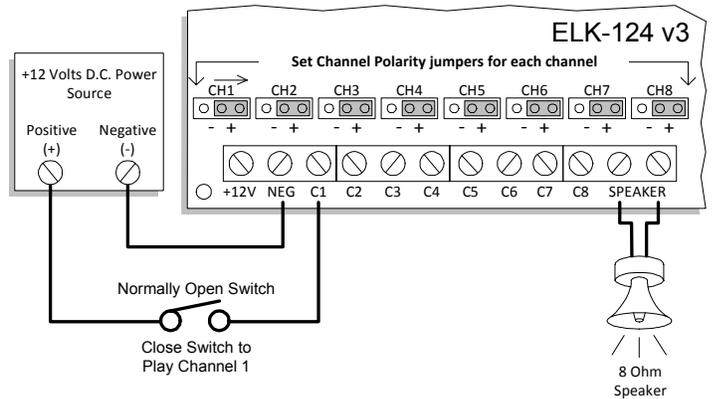
<u>To record with the ELK-129 sound card interface</u> place Jumper **JP1** in the **PRG** position, and **JP2** in the **REPEAT** position. If the message will be longer than 60 seconds, place **JP4** in the **>60** position. Plug the ELK-129 five pin ribbon cable into Programmer Connector J1. Power the ELK-129 and move the SW1 slide switch to **CH1**(this will provide power to the ELK-124). Select the channel to record with the on-board DIP switch. Follow the instructions for the ELK-129, Play a "scripted" WAV.
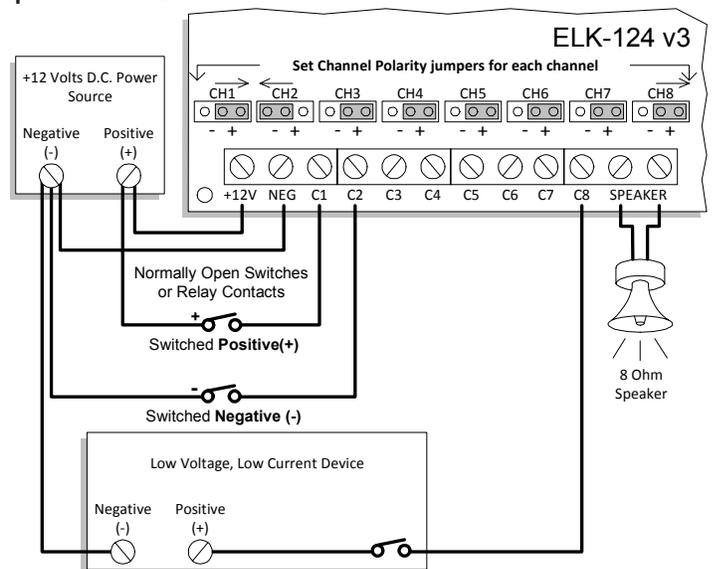
Basic Hookup

Only a +12 Volt D.C. power source is needed to play any of the 8 channels. In this configuration, the playback will stop as soon as power is removed from channel C1 since the ELK-124's power terminal (+12V) is not connected to +12V. Set the Channel Polarity jumpers to "+" for each channel that will be activated with positive voltage.
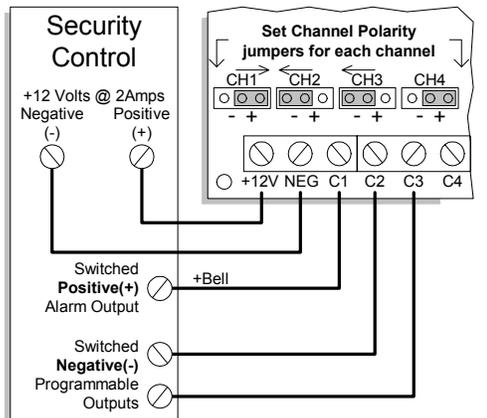

Momentary or Low Current Trigger Method alarm outputs capable of 30 mA.

The operating current is drawn from the constant +12 Volts DC power source. The channel trigger terminals draw only 30 mA each from the control alarm outputs. Messages play through to the end in this configuration.
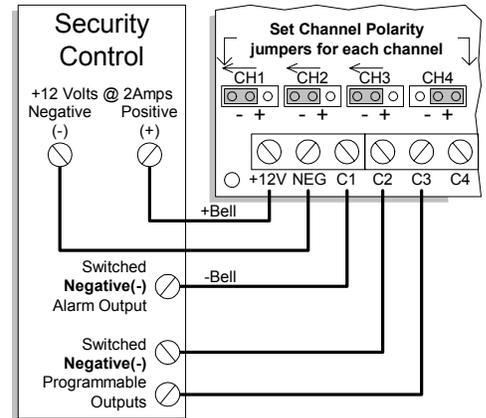

Hookup to a Security Control with a <u>Switched Positive "+"</u> Alarm Output

This method is for Controls that switch their **positive** alarm output. The alarm output plays Channel 1 while Programmable Outputs can be used to play Fire, Police, or Medical messages.

Hookup to a Security Control with a <u>Switched Negative "-"</u> Alarm Output

This method is for Controls that switch their **negative** alarm output. The alarm output plays Channel 1 while Programmable Outputs can be used to play Fire, Police, or Medical messages.
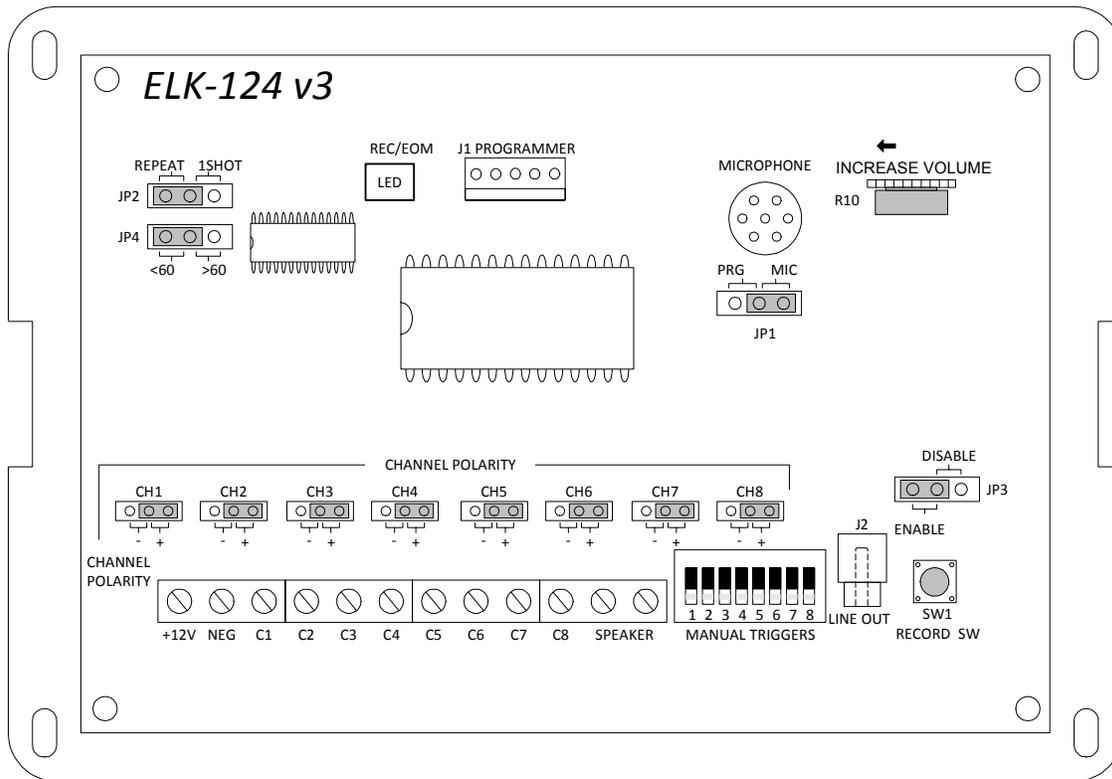
ELK-124 RECORDABLE VOICE MODULE

Figure 1

Summary of Connection Terminals & Switches
[**+12V**] If using a constant 12 Volt DC power source, connect the positive side here. Nominal operating range of the ELK-124 v3 is 11 to 14 Volts DC. This input is only required if: A. Negative Triggering is used. B. Momentary activation of the channels is desired. C. The activating source equipment is current limited to 30 mA or less.
[**NEG**] Connect to the negative side of the 12 Volt DC power source. Also connect the negative from external trigger inputs here if they are from another power source.
[**C1**] Positive or Negative trigger input for Voice channel 1
[**C2**] Positive or Negative trigger input for Voice channel 2
[**C3**] Positive or Negative trigger input for Voice channel 3
[**C4**] Positive or Negative trigger input for Voice channel 4
[**C5**] Positive or Negative trigger input for Voice channel 5
[**C6**] Positive or Negative trigger input for Voice channel 6
[**C7**] Positive or Negative trigger input for Voice channel 7
[**C8**] Positive or Negative trigger input for Voice channel 8
[**SPEAKER**] Connect to 8 ohm speaker. (Max 4 Ohm load)
[**Volume Control** (R10)] Adjusts volume of the speaker output.
[**Manual Triggers**] Selects channel to be recorded. Power must be applied to the +12V and NEG terminals to use this switch.
[**Record Switch** (SW1)] To record a message, set JP1 to MIC, activate desired channel, press SW1, then speak your message into the on-board microphone.
[**Programmer** (J1)] The optional ELK-129 Computer Sound Card Interface module connects to this 5 pin connector to allow computer WAV sound files to be downloaded into the ELK-124.
[**Line Out** (J2)] This RCA type connector provides line level sound output for connection to Public Address amplifiers.

Jumper Settings		
JP1	MIC	Record using the on-board microphone
	PRG	Record using the optional ELK-129 sound interface
JP2	REPEAT	Continuously replays a channel while triggered
	1SHOT	Plays a triggered channel only once.
JP3	ENABLE	Enables the on-board record switch SW1
	DISABLE	Disables record switch, prevents accidental recordings
JP4	<60	Message recordings **cannot** overflow into next channel
	>60	Message recordings **can** overflow into next channel
CH1 thru CH8 Jumpers		Selects either a positive or negative input trigger source for each channel

Message Lengths
Each message location is 1 minute in length, However, messages can be recorded over into adjacent locations to allow for longer than 1 minute messages. If message recordings exceed 1 minute they will overwrite the next adjacent message, thus adjacent message locations become unusable. Total message space is 8 minutes in length.

C1 = Up to 8 Minute Recordable Voice 1 Message
C2 = Up to 7 Minute Recordable Voice 2 Message
C3 = Up to 6 Minute Recordable Voice 3 Message
C4 = Up to 5 Minute Recordable Voice 4 Message
C5 = Up to 4 Minute Recordable Voice 5 Message
C6 = Up to 3 Minute Recordable Voice 6 Message
C7 = Up to 2 Minute Recordable Voice 7 Message
C8 = Up to 1 Minute Recordable Voice 8 Message