

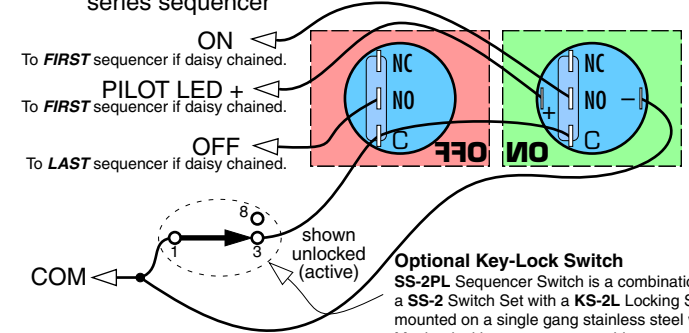
**A.C. Sequencing Systems**

**Wire requirements**

Switch set to sequencer: 4 conductors.  
 Between daisy chained sequencers:  
 9 conductors, 11 if Power Vouchers are used.  
 Up to 2500 ft. run: 24 ga.  
 2,500 to 3,750 ft. run: 22 ga.

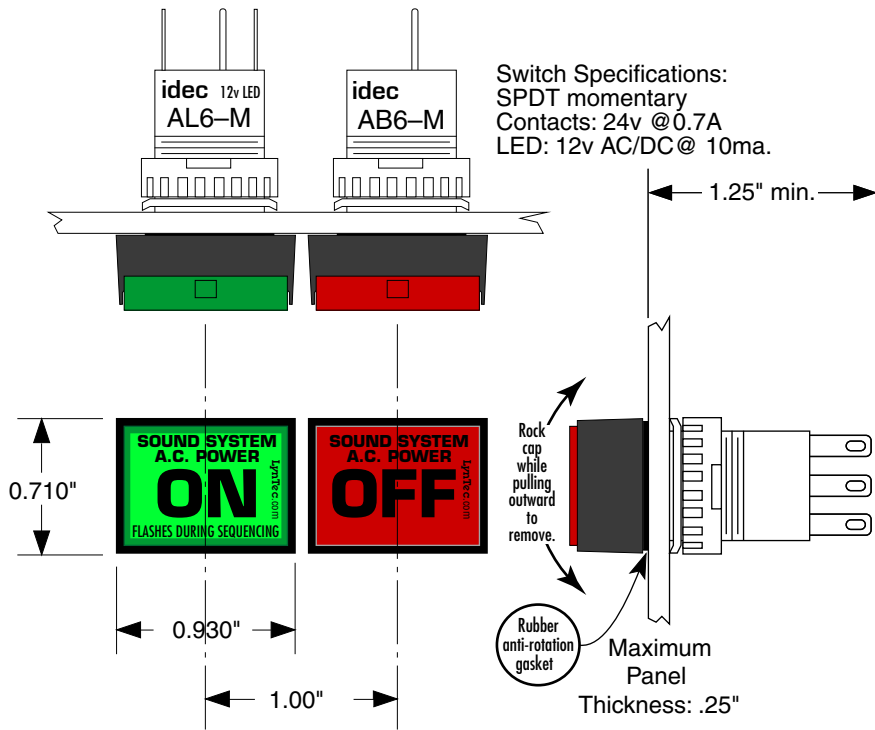
To **LynTec**  
**PDS, MRTS, MSLC,**  
**SLC, MSP or SP**  
 series sequencer

Rear view wiring diagram

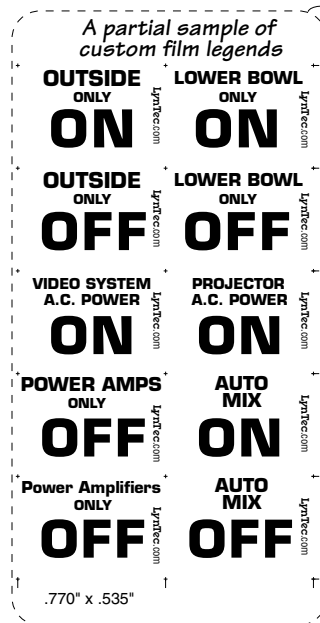


**Optional Key-Lock Switch**  
 SS-2PL Sequencer Switch is a combination of a SS-2 Switch Set with a KS-2L Locking Switch, mounted on a single gang stainless steel wall plate. Mechanical layout on reverse side.

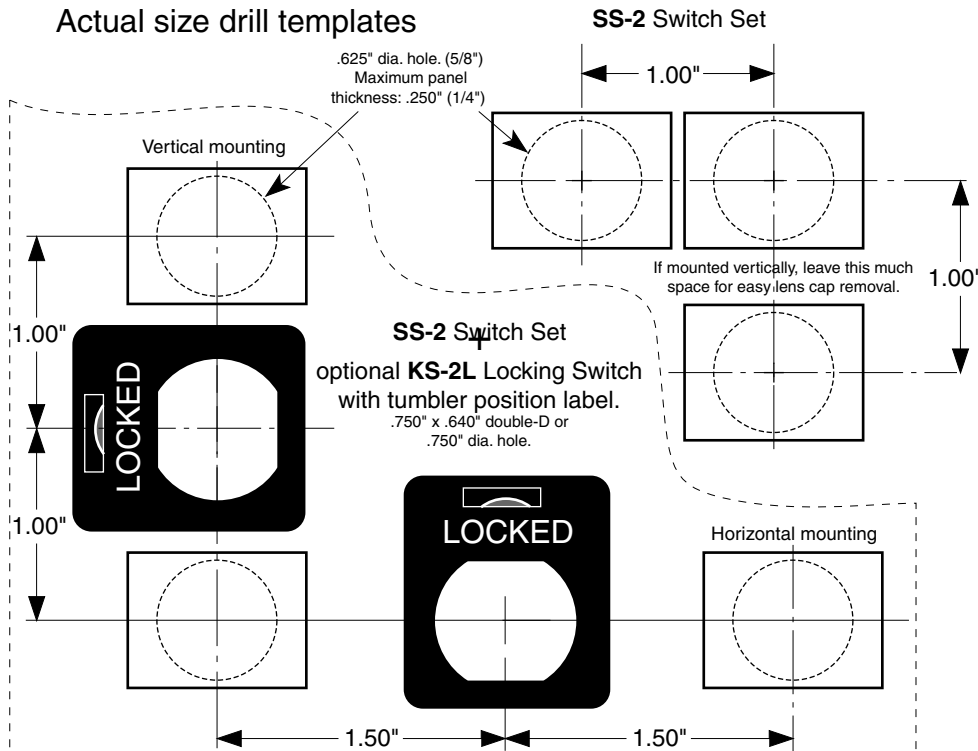
See reverse side for multiple switch set wiring.



Switch Specifications:  
 SPDT momentary  
 Contacts: 24v @0.7A  
 LED: 12v AC/DC @ 10ma.



**Actual size drill templates**



**LynTec**

**one**

**SS-2 Sequencer Switch Set**

Up to 5\* additional remote control locations may be added to the system with additional switch sets or with other momentary switches.

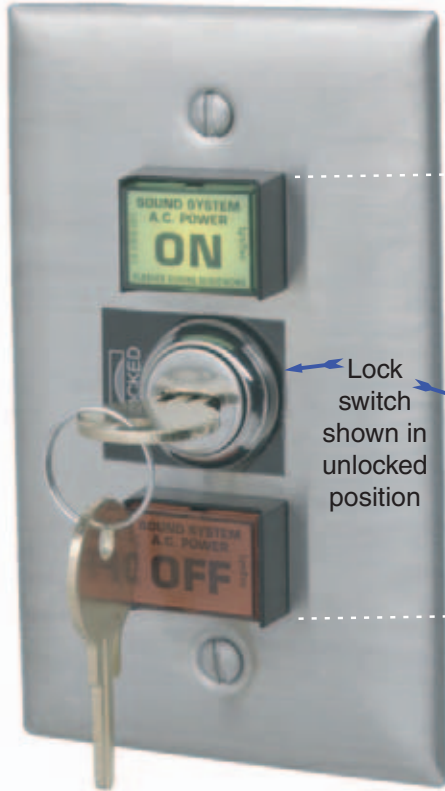
139-0252-13.1 SS-2 insert 7/2/09

For **SS-32** Switch Sets see [http://www.lyntec.com/139-0396\\_SS-32\\_Insert.pdf](http://www.lyntec.com/139-0396_SS-32_Insert.pdf)

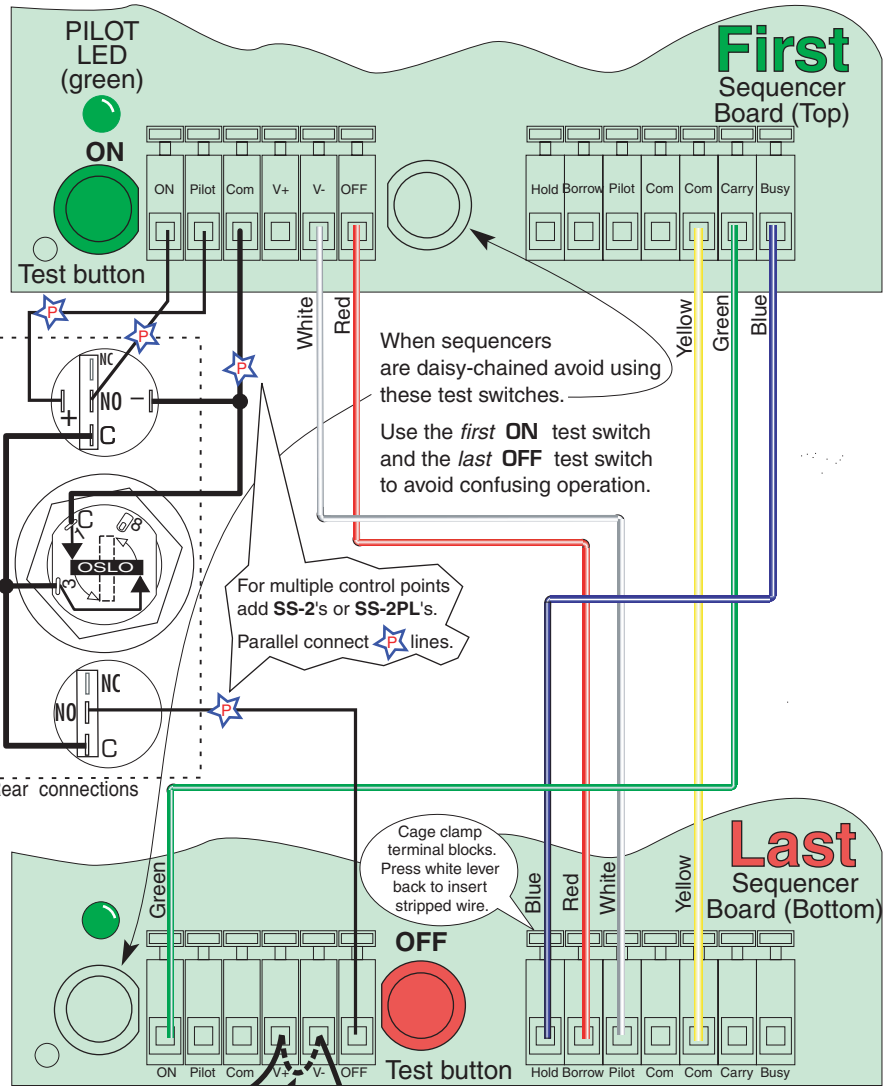
# Multiple Sequencer Hookup Diagram For SLC & SP LynTec Power Sequencers (no longer in production)

Showing Low-Voltage Remote **ON/OFF** Control  
and Daisy-Chain Wiring

One set of the **ON** and **OFF** switches shown below are supplied *unmounted* as a **SS-2** Switch Set with each LynTec sequencer cabinet. Mount in 5/8" dia. round holes in panels up to 1/4" thick.



**LynTec Model SS-2PL**  
Locking Switch Set.  
(Optional)



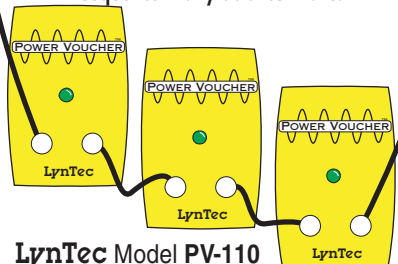
When sequencers are daisy-chained avoid using these test switches. Use the *first* ON test switch and the *last* OFF test switch to avoid confusing operation.

For multiple control points add SS-2's or SS-2PL's. Parallel connect  $\star$  lines.

Cage clamp terminal blocks. Press white lever back to insert stripped wire.

Install Jumper in LAST sequencer board only if POWER VOUCHERS are not installed.

Optional Power Vouchers verify all circuits are hot and no circuit breakers are tripped. ON light won't stay lit at end of ON sequence if any ac circuit fails.



**LynTec Model PV-110**  
Power Verification Module  
(Optional)

**Daisy-Chain wiring: 10 conductors max.**

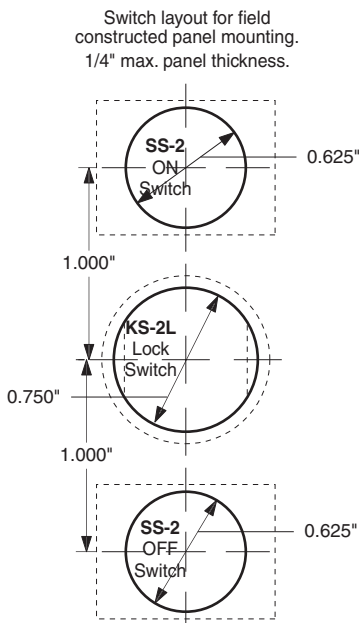
(Worst case with multiple switch set locations and Power Vouchers™)

See <http://www.lyntec.com/139-0252.pdf>

for multi-panel daisy chain connections.

$\star$  Parallel connect additional SS-2 switch sets for multiple remote control locations. **4 conductors, 22 ga., 5,000 ft. max.**

Maximum number of switch sets:  
SLC's & SP's support 6 switch sets.  
PDS-8's support 3 switch sets.



Switch layout for field constructed panel mounting. 1/4" max. panel thickness.

# Multiple Sequencer Hookup Diagram

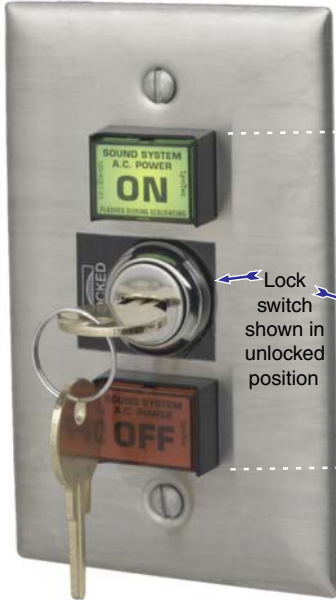
## For LynTec MSLC and MSP MODULAR and PDS series Power Sequencing Products

Custom switch legends you can print on your laserprinter

Showing Low-Voltage Remote ON/OFF Control and Daisy-Chain Wiring

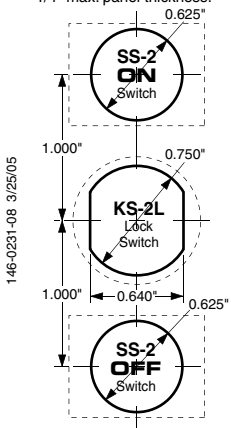
See [http://www.lyntec.com/139-0309\\_CSLF-1\\_Film.pdf](http://www.lyntec.com/139-0309_CSLF-1_Film.pdf)

One set of the **ON** and **OFF** switches shown below are supplied unmounted as a **SS-2** Switch Set with each LynTec sequencer cabinet. Mount in 5/8" dia. round holes in panels up to 1/4" thick.



**LynTec Model SS-2PL**  
Locking Switch Set.  
(Optional)

Switch layout for field constructed panel mounting.  
1/4" max. panel thickness.



Parallel connect additional SS-2 switch sets for multiple remote control locations.  
**4 conductors, 24 ga., 5,000 ft. loop max.**

Maximum number of switch sets:

All LynTec sequencers support 6 switch sets.

**LynTec**

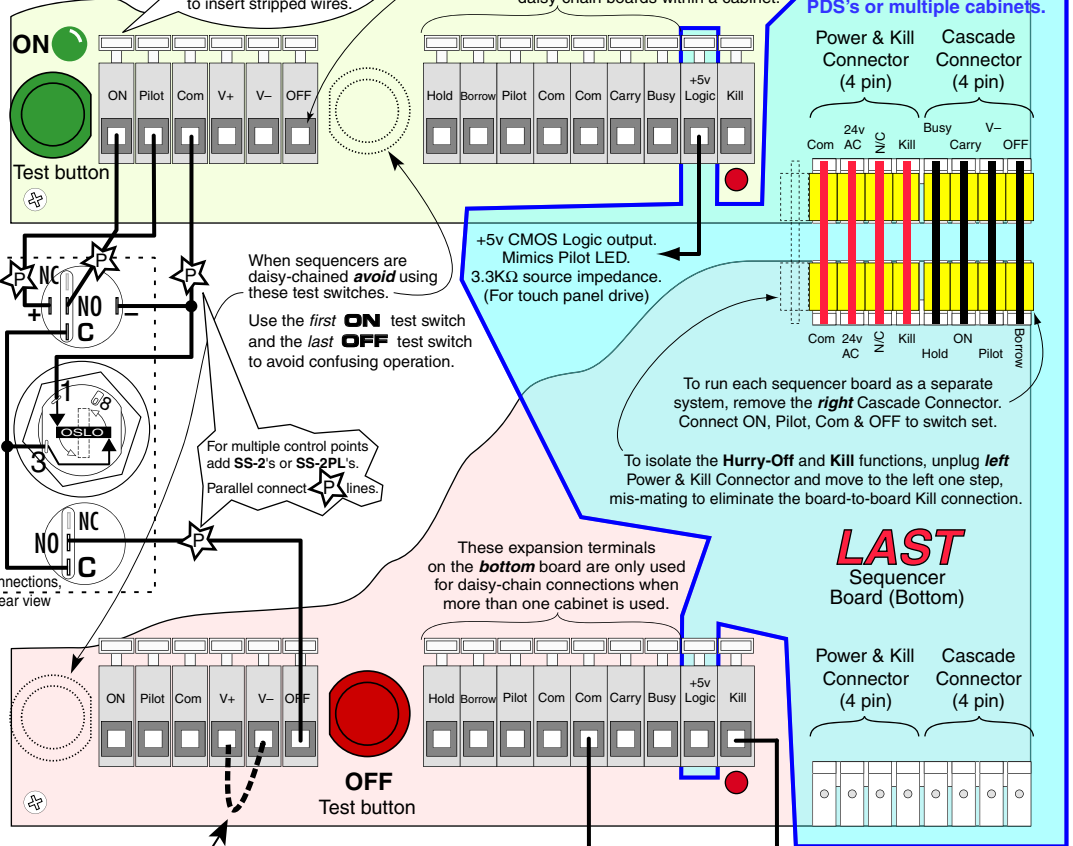
Lenexa, KS (Central time zone) U.S.A.  
Voice **800-724-4047** or 913-529-2233  
Fax **888-722-4157** or 913-529-4157  
[www.LynTec.com](http://www.LynTec.com)

For **single** sequencer board hookup connect OFF switch normally open to OFF.

PILOT LED (green)

Cage clamp terminal blocks. Press white levers back with small straight-blade screwdriver to insert stripped wires.

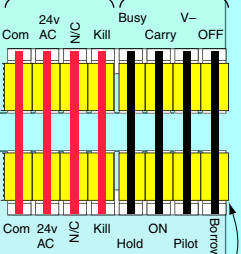
These expansion terminals on the top or middle boards are NOT used when the cascade connectors are used to daisy-chain boards within a cabinet.



**FIRST**  
Sequencer Board (Top)

**NOT in PDS series**  
See daisy-chain connections below for wiring between PDS's or multiple cabinets.

Power & Kill Connector (4 pin)  
Cascade Connector (4 pin)



+5v CMOS Logic output. Mimics Pilot LED. 3.3KΩ source impedance. (For touch panel drive)

When sequencers are daisy-chained **avoid** using these test switches. Use the **first ON** test switch and the **last OFF** test switch to avoid confusing operation.

For multiple control points add SS-2's or SS-2PL's. Parallel connect lines.

To run each sequencer board as a separate system, remove the **right** Cascade Connector. Connect ON, Pilot, Com & OFF to switch set.

To isolate the **Hurry-Off** and **Kill** functions, unplug **left** Power & Kill Connector and move to the left one step, mis-mating to eliminate the board-to-board Kill connection.

**LAST**  
Sequencer Board (Bottom)

Power & Kill Connector (4 pin)  
Cascade Connector (4 pin)

These expansion terminals on the **bottom** board are only used for daisy-chain connections when more than one cabinet is used.

Install Jumper in LAST sequencer board only if POWER VOUCHERS are not installed.

**Kill — Fire alarm shutdown**

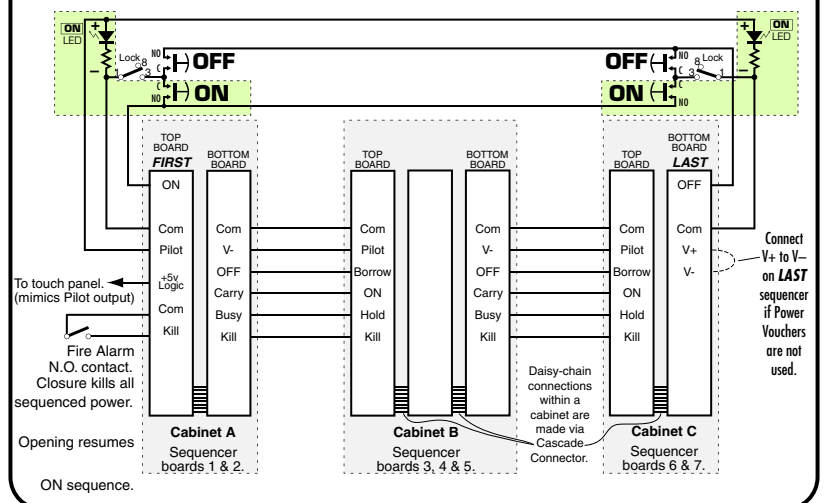
External contact closure lights the red Kill LEDs and kills all sequenced power.

Contact opening restarts the ON sequence.

See next page for enlarged daisy-chain hookup

Low voltage control wire: 24 gauge minimum, 5,000 ft. loop max.

A typical three panel, daisy-chained, system with two locking control locations.



For SS-32 Switch Sets see

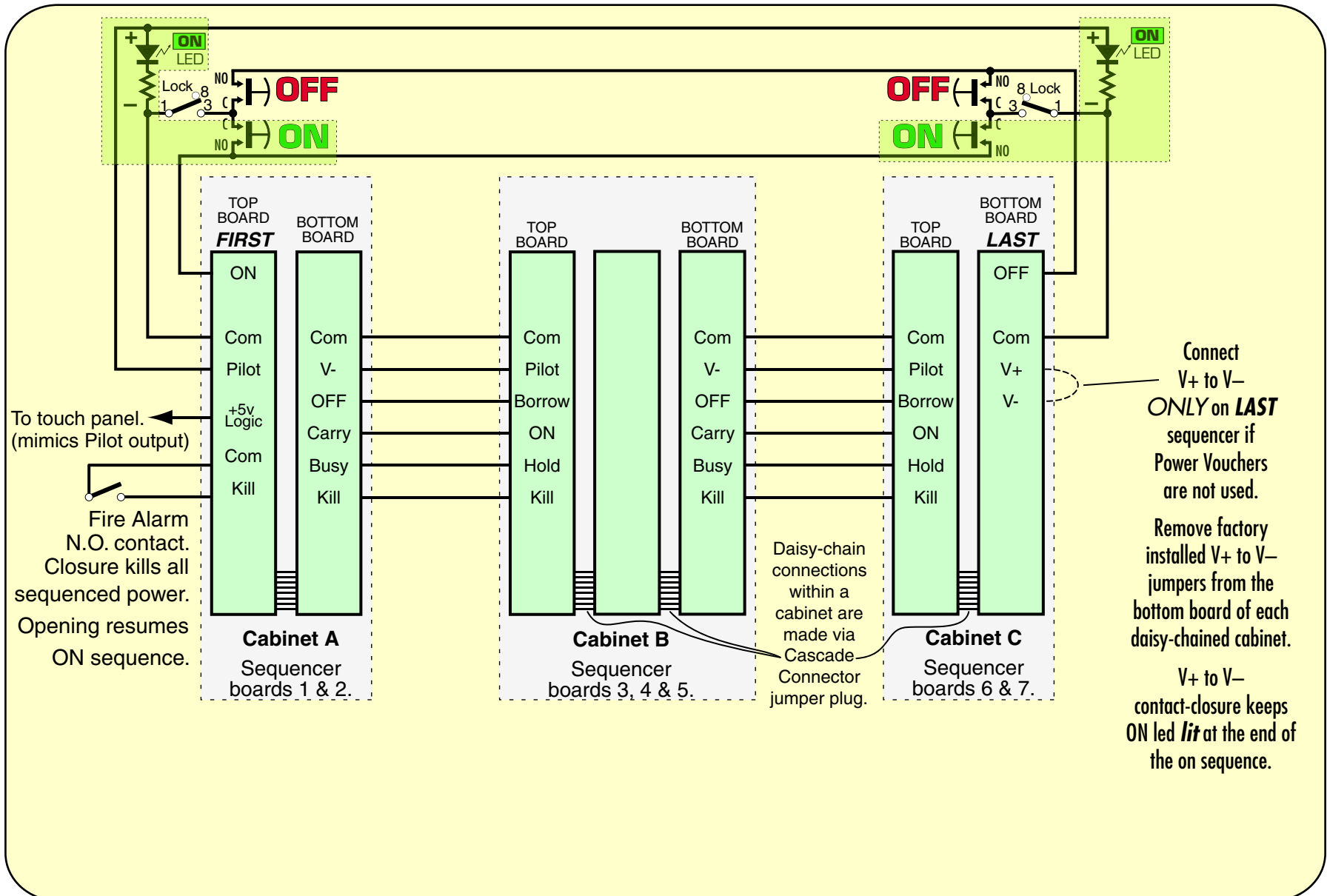
[http://www.lyntec.com/139-0396\\_SS-32\\_Insert.pdf](http://www.lyntec.com/139-0396_SS-32_Insert.pdf)

# A typical LynTec three panel, daisy-chained system with two locking control locations.

For Timing Diagram and Logic levels  
See [http://www.lyntec.com/139-0266\\_Seq\\_Timing.pdf](http://www.lyntec.com/139-0266_Seq_Timing.pdf)

## Wire Requirements for Remote Controls

- Basic system ON/OFF Control from one panel only ....4 conductors
- Basic + Kill Add Kill function .....6 conductors
- 2 conductors to Kill control location
- Remote control at both ends .....9 conductors
- Kill, Remote control both ends, full power verification .....11 conductors
- Low voltage control wire: 24 gauge minimum, 5,000 ft. loop max.



# Built-in Kill, Hurry-Off and **ZipOff** (PANIC) switch option for **MSLC** and **MSP** and **PDS-8EK** series AC SEQUENCING SYSTEMS

## What the functions do

### Kill — EMERGENCY SHUTDOWN

Provides an *IMMEDIATE* shut down method for the sound system at the command of a fire alarm, emergency announcement system, or ZipOff switch.

### Optional **ZipOff** switch, **ZOS-5K**

Provides a full AC Power shutdown within 250 milliseconds after the **ZipOff** button is pushed.

In case of a runaway oscillation or other unexpected signal which could damage the loudspeakers if sustained...

Lift the protective cover and press the ZipOff button... it latches down and lights red. The AC power sequencing system immediately zips off.

Press again to unlatch... the light goes out and the sequencer restarts to repower the system.

OR

Use the new **Hurry-Off** function at any OFF switch.

### MULTI-BOARD SHUNT R

The Kill line is an 11 ma. current source from each MS-12 Modular Sequencer or PDS-8 EK board

A voltage sensor on the Kill line determines the Kill threshold.

The Kill line has an open circuit voltage of 28 volts which must be pulled down to less than 10.5 volts to generate a Kill function. Grounding the Kill line to Common will always kill the system instantly. This current source may also be used to light the Zip-Off switch's, red LED.

The red ZipOff LED only requires 10 ma. For systems where multiple-board system's Kill lines are paralleled, a 9 v. voltage regulator chip is installed in the **ZOS-5K** which will automatically shunt the excess source current of up to 5 boards. For more than 5 boards an additional resistor must be used in parallel with the ZipOff switch LED. To prevent damage due to overheating the voltage regulator chip, the resistor should be installed as shown with **full length leads** to get the heat source away from the switch.

Total Number of boards	Shunt Resistor required	
1-5 .....	none	
6 .....	820Ω, 1/4w	16 .....
7 .....	430Ω, 1/4w	17 .....
8 .....	270Ω, 1/2w	18 .....
9 .....	200Ω, 1/2w	19 .....
10 .....	150Ω, 1/2w	20 .....
11 .....	150Ω, 1w	21 .....
12 .....	120Ω, 1w	22 .....
13 .....	100Ω, 1w	23 .....
14 .....	92Ω, 1w	24 .....
15 .....	82Ω, 1w	25 .....

## What to specify or order

For **ZipOff** switch order **ZOS-5K**. (services up to 5 Kill equipped boards)

Includes switch with ZipOff film legend and flip up security cover.

Switch mounts in 5/8" round hole in panels up to 3/16" thick.

**ZOS-5K** Contractor C.O.D. price: \$40.

Delivery: Stock.

## Hurry-Off

The MS-12 Modular & PDS-8EK Sequencing boards have a new Hurry-Off function. If you **hold down** any OFF switch for two seconds, a "Kill without restore" function is triggered. The system shuts down within 250 milliseconds and doesn't restart until you give it a new ON command. Kinda like a DSP undo command.

## How they work

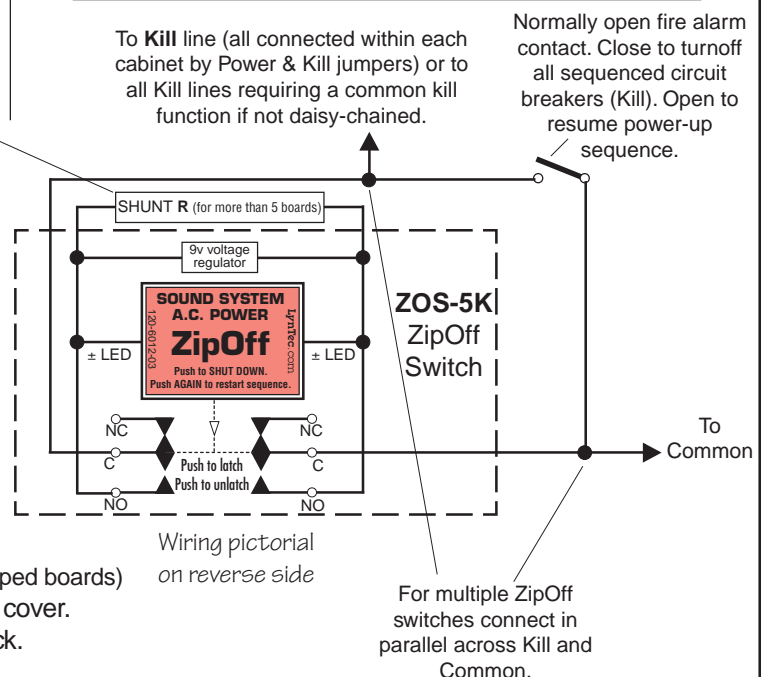
All LynTec sequencing systems have the ZipOff load shedding feature. The older SLC, SP and PDS-8's implemented it by interrupting 24v ac power.

The newer Modular sequencers, the MSLC and MSP series and the PDS-8EK, load shed when power fails, but also have a **Kill** function that is triggered by grounding the **Kill** line.

The red **Kill** LED, adjacent to the Kill terminal on the board, lights and Zip-Off is immediate. The kill line is a low current line. Long control wiring may be used without concern for loop resistances up to 32Ω. (22 gauge, up to a 1,000 ft. run [2,000 ft. loop] or a 680 ft. run of 24 ga).

The ON/OFF *latching* pilot relay remembers that the sequencer was ON. When the **Kill** line is opened, the ON sequence repeats, bringing the AC power back on.

For the Modular series control boards the **ZipOff** switch connects the Kill line to common, through the Zip-Off switch's LED, initiating the Kill function.

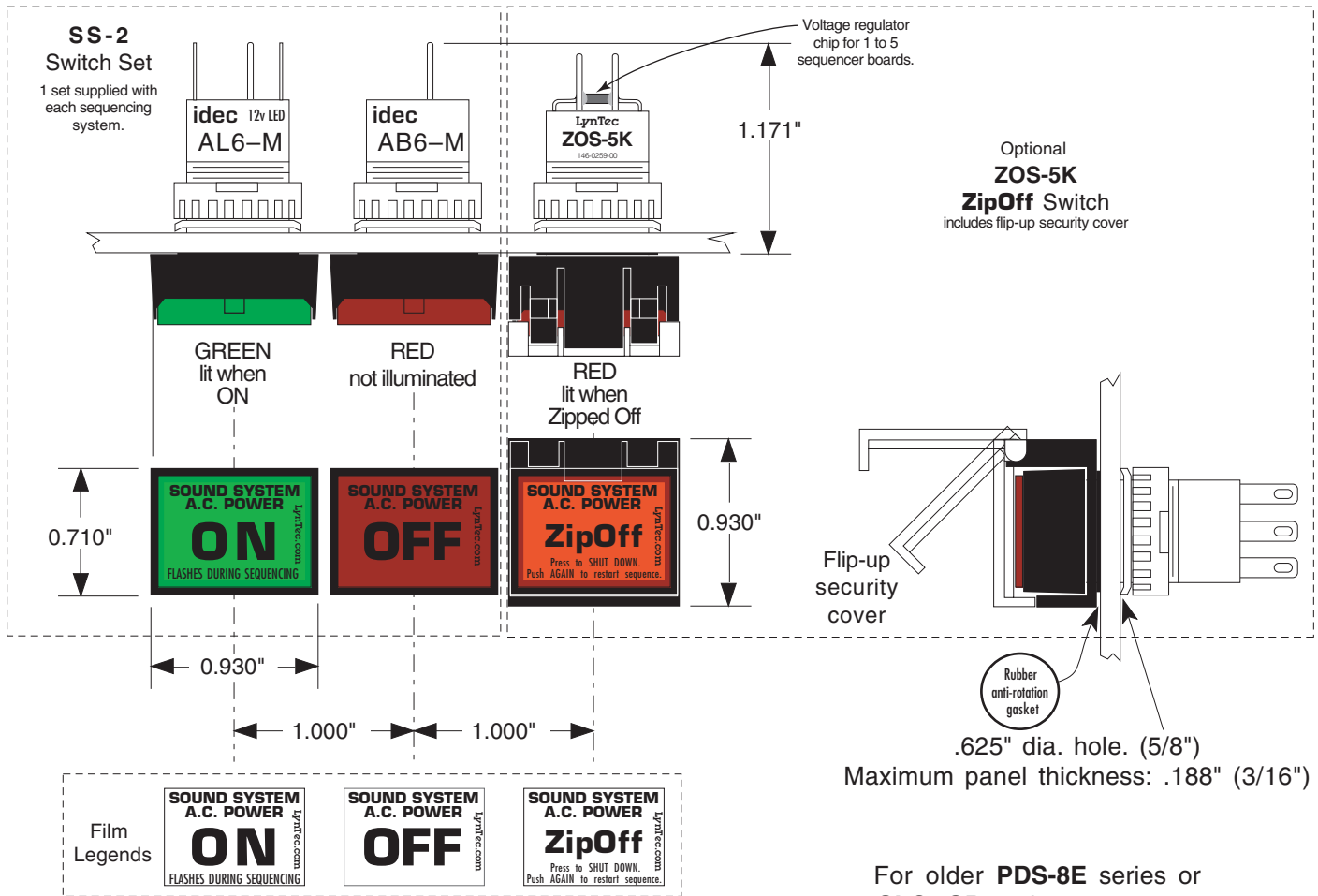


www.**LynTec**.com

8401 Melrose Drive • Lenexa, KS 66214 • Voice **800-724-4047** or 913-529-2233 • Fax **888-722-4157** or 913-529-4157

for **Modular A.C. Sequencing Systems**, models **MSLC, MSP & PDS-8EK.**

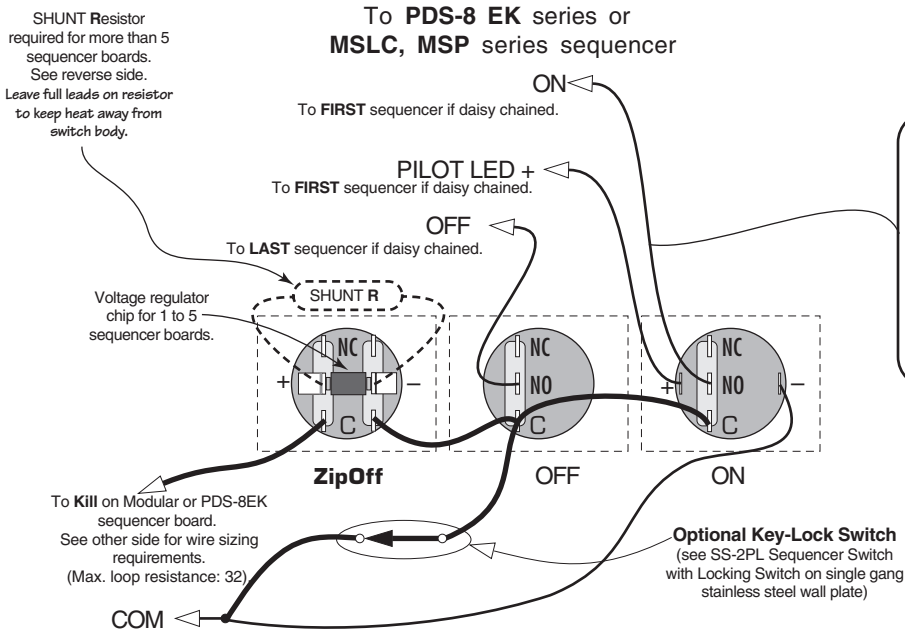
## ON, OFF and ZipOff switch mounting & wiring



For older **PDS-8E** series or **SLC, SP** series sequencers see

[http://www.lyntec.com/139-0137\\_ZOS-1.pdf](http://www.lyntec.com/139-0137_ZOS-1.pdf)

### Wiring pictorial - Rear view



#### Wire requirements

Switch set to sequencer: 4 conductors.  
Between daisy chained Modular sequencers: 9 conductors, 11 if Power Vouchers are used.  
Up to 5,000 ft. run: 22 ga.,  
5,000 to 7500 ft. run: 20 ga.  
7,500 to 10,000 ft. run: 18 ga.  
See other side for **ZipOff** wire sizing.