



IONIC SPIKE KIT

THE UNIVERSAL ELECTRONIC SAFE LOCK SPIKING SOLUTION

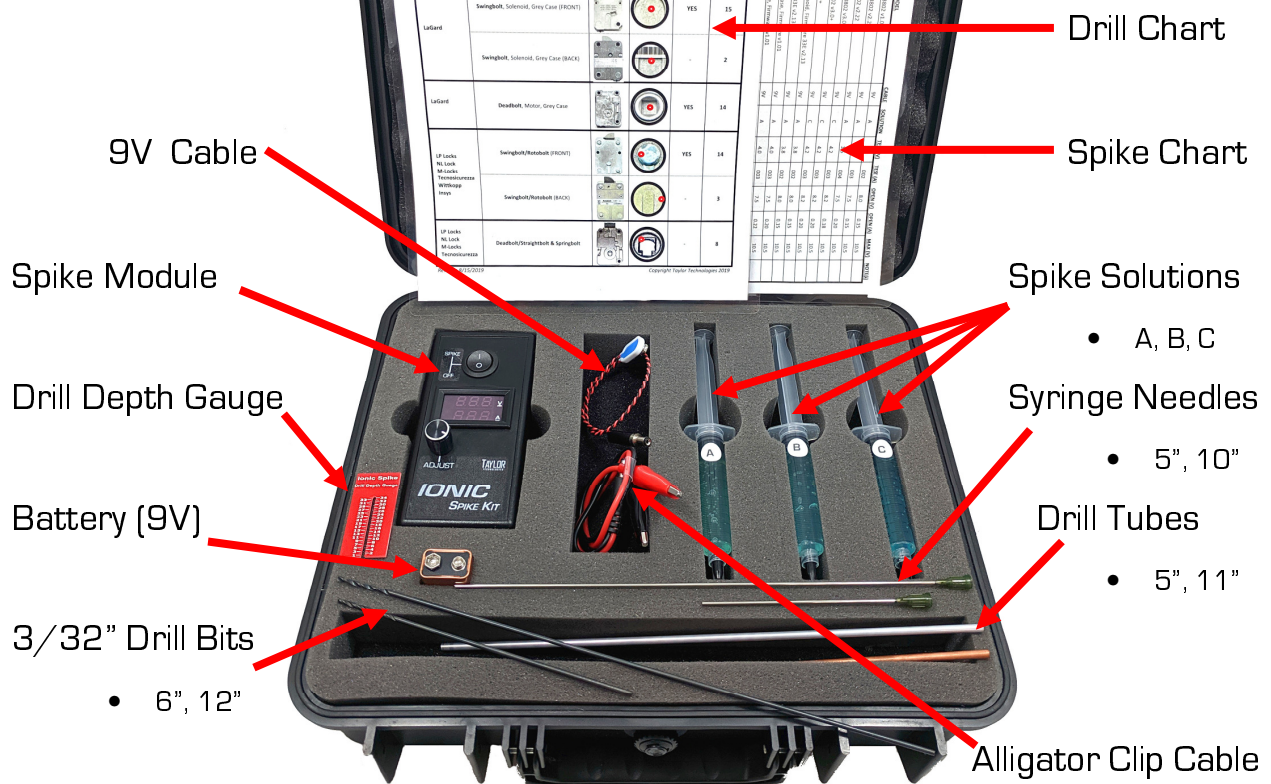


PATENT PENDING

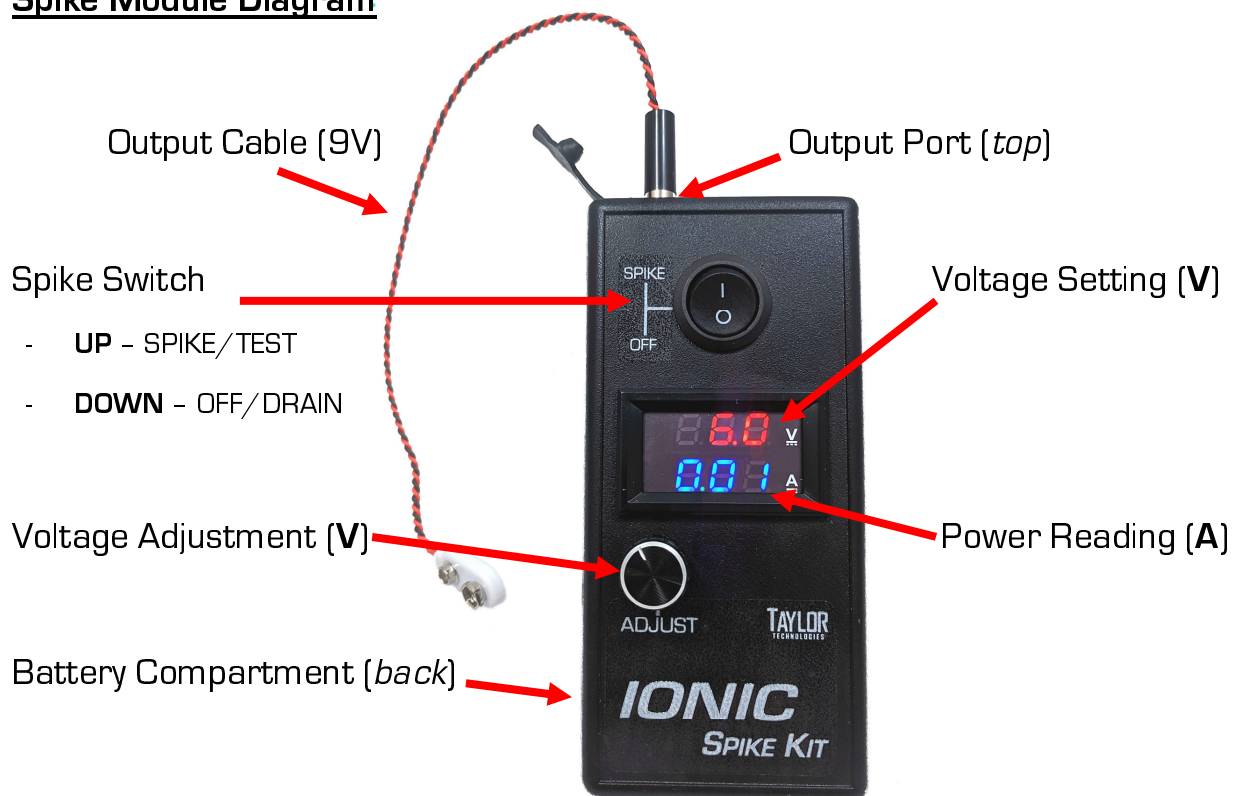
Description:

The *Ionic Spike Kit* is a revolutionary approach to spiking electronic safe locks that eliminates the issues commonly encountered with conventional spiking solutions. Traditional spiking kits use an assortment of customized probes to deliver power to specific spiking points inside the lock case with each probe individually designed for a unique model of electronic lock. Even with a specifically designed probe it is often impossible to reach the necessary spiking points when working through the spindle hole on the safe. The *Ionic Spike Kit* completely eliminates the need for traditional spike probes through the use of an adjustable Spiking Module and a set of calibrated spiking gels that quickly spike open the majority of electronic safe locks through a small 3/32" hole drilled into the lock case through the safe's spindle hole. This new approach creates a nearly universal spiking solution that can be instantly adjusted to each specific lock model with the simple turn of a knob using the settings shown on the included Spiking Charts.

Kit Contents



Spike Module Diagram





Basic Spiking Procedure

- Step 1)** **Drill** hole into lock case through spindle hole [*see Drill Chart*]
- Step 2)** **Connect** Spike Module to keypad
- Step 3)** Set Spike Module to **TEST(V)** value and press **SPIKE** [*see Spike Chart*]
- Step 4)** **Inject** spiking solution
- Step 5)** Wait for **TEST(A)** reading to indicate contact with motor/solenoid drive circuit
- Step 6)** Press **OFF**, adjust Spike Module to **OPEN(V)** value [*see Spike Chart*]
- Step 7)** Press **SPIKE** to fire solenoid/motor and open lock

Step 1) Drill Hole into Lock Case through Spindle Hole

- Remove keypad and identify lock. Locate lock body on the included ***Drill Chart***.

Example Drill Chart Data

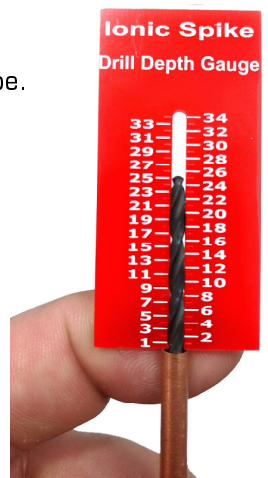
| Manufacturer | Lock Type | Lock Photo | Drill Position (VU) | Thru Board? | Drill Depth (mm) |
|--|--------------------------|------------|---------------------|-------------|------------------|
| LaGard Kaba Auditcon Kaba Cencon | Swingbolt, Motor (FRONT) | | | YES | 14 |
| | Swingbolt, Motor (BACK) | | | - | 3 |

Drill Position (VU) – Shows a spindle hole view of the lock case when mounted vertical up (VU). Red “bullseye” indicates the correct position to drill into lock case.

Thru Board? – Indicates if you should drill entirely thru the circuit board

Drill Depth (mm) – Indicates the appropriate drilling depth for the lock/mounting type. This is measured from the surface of the lock at the Red “bullseye” drill position.

- Place drill bit on ***Drill Depth Gauge*** at the indicated Drill Depth (mm)
- Slide **tube** on drill bit until it contacts Depth Gauge
- Chuck drill bit into drill motor with tube resting against face of drill chuck.
- Use Depth Gauge to confirm the drilling depth of the bit once it is chucked up.
- Drill into lock at position indication on Drill Chart (red bullseye)
- A **RED ARROW** on the chart indicates that you should angle the drill bit in the direction of the arrow while drilling



NOTE: The drill tube protects the lock cable and also functions as a depth stop for the drill bit



Step 2) Connect Spike Module

- Connect fresh, high quality 9-volt battery to Spike Module and insert into battery compartment (*located on rear of module*)
 - The battery **MUST** be fresh (9.4V+) and have high current capacity
 - Recommended Batteries:
 - GOOD: *Duracell, Duracell Quantum, Rayovac Fusion*
 - BETTER: *Energizer Advanced Lithium*
 - BEST: *JumpBox, JumpStart*
- Connect correct output cable to output port on top of Spike Module (*see Spike Chart - "CABLE" & listing on back of Spike Chart*)



Step 3) Adjust Spike Module to TEST(V)

- Refer to **Spike Chart** for correct TEST(V) value.
- Rotate Adjustment Dial on Spike Module until the voltage **(V)** shown on top row of LED readout matches the **TEST(V)** value shown on the Spike Chart
- Place the Spike Switch in the **SPIKE** position to begin sending power to lock

Example Spike Chart Data

| LOCK MFG | LOCK MODEL | CABLE | SOLUTION | TEST (V) | TEST (A) | OPEN (V) | OPEN (A) | MAX (V) | NOTES |
|----------|---|-------|----------|----------|----------|----------|----------|---------|-------|
| LaGard | Basic, Solenoid, Gray Case, Firmware 3802 v1.00 | 9V | A | 3.8 | 0.02 | 8.0 | 0.15 | 10.5 | |
| LaGard | Basic, Solenoid, Gray Case, Firmware 3802 v2.22 | 9V | A | 3.5 | 0.03 | 7.5 | 0.15 | 10.5 | |
| LaGard | Basic, Motor, Gray Case, Firmware 3802 v2.22 | 9V | A | 3.5 | 0.04 | 7.5 | 0.20 | 10.5 | |
| LaGard | Basic, Solenoid, Gray Case, Firmware 3802 v3.0+ | 9V | C | 4.2 | 0.03 | 8.2 | 0.18 | 10.5 | |

CABLE – Method used to connect output cable to keypad or lock cable

SOLUTION – Spiking Solution to use with lock

TEST(V) – Voltage setting to test for contact with motor/solenoid drive circuit

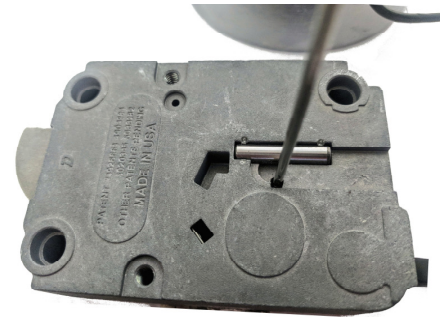
TEST(A) – Power reading that indicates successful contact with drive circuit

OPEN(V) – Voltage setting to activate motor/solenoid and open lock

OPEN(A) – Power reading that indicates successful opening (fired motor/solenoid)

MAX(V) – The recommended maximum voltage setting for this particular lock model

NOTES – Model specific notes (*see back of Spike Chart*)



Step 4) Inject Spiking Solution

- Refer to **Spike Chart** for correct spiking solution for lock model
- Remove storage cap from syringe and attach needle probe
- Insert syringe needle fully into lock through drill hole. Make sure the needle passes through the circuit board if “THRU BOARD?” is indicated on the Drill Chart.
- Inject 2ML of spiking solution while observing power reading **(A)** on Spike Module
 - *Continue to Step 5*

Step 5) Wait for **(A)** reading on Spike Module to indicate contact with motor/solenoid drive circuit

- Refer to **Spike Chart** for the value of **TEST(A)** that would indicate contact with motor/solenoid drive circuitry
- If **(A)** is *below* **TEST(A)** value (no contact), then place switch in **OFF** position for 60 seconds to allow spiking solution to work its magic.
- Place switch back in **SPIKE** position and check **(A)** reading on Spike Module again
 - If **(A)** reading is *below* **TEST(A)** value then repeat Step 4
 - If **(A)** reading is *at or above* **TEST(A)** value then continue to Step 6

Step 6) Adjust Spike Module to **OPEN(V)**

- Place switch in **OFF** position
- Adjust Spike Module voltage **(V)** to **OPEN(V)** value shown on **Spike Chart**
- Place switch in **SPIKE** position and *immediately* try safe handle
- Observe the **(A)** reading on Spike Module and compare to **OPEN(A)** value to determine if motor/solenoid has fired (*lock should open!*)
- If lock opens, immediately place switch in **OFF** position to avoid damage to module
- If lock *does not* open –
 - If **(A)** reading is *below* **OPEN(A)** value shown on Spike Chart, repeat Step 4
 - If **(A)** reading is *at or above* **OPEN(A)** value, place switch in **OFF** position for 60 seconds then back in **SPIKE** position and immediately try safe handle. Repeat this process 2 to 3 times before eventually repeating Step 4 (*more spike gel!*)

Example Spike Chart Data

| LOCK MFG | LOCK MODEL | CABLE | SOLUTION | TEST (V) | TEST (A) | OPEN (V) | OPEN (A) | MAX (V) | NOTE(S) |
|----------|---|-------|----------|----------|----------|----------|----------|---------|---------|
| LaGard | Basic, Solenoid, Gray Case, Firmware 3802 v1.00 | 9V | A | 3.8 | 0.02 | 8.0 | 0.15 | 10.5 | |
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Spiking Solution Information

The spiking solutions included in the Ionic Spike Kit are non-toxic and do not require any special handling or disposal procedures. When left in contact with certain metals for prolonged periods the spiking solutions can result in corrosion of the metal surface. Although we recommend always replacing any locks opened with the Ionic Spike Kit, it is sometimes possible to re-use these locks in certain situations when the spiking solution is removed promptly. Excess spiking solution can typically be wiped off of internal lock components using a dry paper towel or soft cloth. The remaining residue can be removed by flushing the lock circuit board with denatured alcohol and contact cleaner.

Refills / Replacement Parts

Replacement spiking solutions are affordably priced and available on-line at <http://www.taylortechtools.com/shop>

Contacting Technical Support

Web: <http://www.taylortechtools.com/>

Email: sales@taylortechtools.com

Phone: (859) 363-5978