

# LaGrange College Athletic Department

## Lightning Safety Policy

Lightning is a dangerous phenomenon. Athletic teams that practice and compete outdoors are at risk when the weather is inclement. The Athletic Training staff has developed a lightning safety policy to minimize the risk of injury from a lightning strike to LaGrange College student-athletes, coaches, support staff and fans. To monitor lightning the Athletic Training staff will utilize a Sky Scan Lightning Detector, Spectrum Pro Thunder Bolt Lightning Detector and the Flash-to-Bang Method. Our policy is in accordance with the *2006-2007 NCAA Sports Medicine Handbook* regarding lightning safety.

### GENERAL POLICY

A member of the Athletic Training Staff will monitor the weather and make the decision to notify the head coach or officials of dangerous situations and recommend the suspension of activity in the event of lightning. Exceptions will be made for any activity where an Athletic Training staff member is not in attendance, whereby the supervising coach will have the ability to suspend activity. The decision to suspend activity will be based on:

- Two subsequent readings on either the Sky Scan or PRO Thunder Bolt Lightning Detectors in the 3-8 mile range regardless of the presence of visible lightning. (These devices are portable and will be in the possession of the athletic training staff member or supervising coach.) and/or
- Utilization of the Flash-to-Bang Method (Count the seconds from the time the lightning is sighted to when the clap of thunder is heard. Divide this number by five to obtain how far away, in miles, the lightning is occurring.) If it reveals lightning to be within 6 miles (a 30 second count between the flash of lightning and the bang of thunder) activity is to be suspended and everyone should seek shelter immediately.

### PRIOR TO COMPETITION

A member of the Athletic Training staff will meet with the officials, explain that we have means to monitor the lightning, and offer to notify the officials during the game if there is imminent danger from the lightning. If a situation arises, the athletic trainer and game officials will then decide whether to discontinue play.

### ANNOUNCEMENT OF SUSPENSION OF ACTIVITY

Once it is determined that there is danger of a lightning strike, the Athletic Training staff member will notify the head coach and/or official and subsequently immediately remove all student-athletes, coaches, and support staff from the playing field or practice area/facility.

## EVACUATION OF THE PLAYING FIELD

Immediately following the announcement of suspension of activity all student-athletes, coaches, officials and support personnel are to evacuate to the nearest enclosed grounded structure.

Student-athletes wearing metal spikes should remove and not hold metal equipment (bats, golf clubs, etc.)

**OUTDOOR INSTRUCTIONS:** If no safe structure or location is within a reasonable distance, find a thick grove of small trees surrounded by taller trees, a dry ditch without water, or seek a flat area (do not choose an open area where you will be the highest object). When there, crouch down wrapping your arms around your knees and lower your head to minimize contact with the ground and wait for the storm to pass.

**REMEMBER –** An automobile, golf cart, or open shelter are not ideal shelters, but will offer you some protection from a lightning strike. Do not touch any metal structures directly after a lightning strike.

## At LC

- Football Practice Field: Evacuate to the locker room
- Callaway Stadium: Evacuate to the locker rooms
- Soccer: Evacuate to the CEB
- Cross Country: Nearest suitable structure. (see above for outdoor instructions)
- Softball: Evacuate to the locker room
- Baseball: Evacuate to the locker room
- Tennis: Evacuate to the Natatorium or CEB
- Golf: Nearest suitable structure. (see above for outdoor instructions)

## AWAY EVENTS

Athletic teams at LC will not travel with the Sky Scan or Thunder Bolt Lightning Detector. Athletic staff on away trips will rely on the Flash-to-Bang Lightning Detection Method. Athletic Training staff members will offer to notify the officials during the game if there is imminent danger from the lightning. The LC Athletic Training staff reserves the right to discontinue playing, in the event the game officials have not suspended play with the knowledge of inclement weather.

## EVACUATION OF THE STANDS

During a competition, once the decision to suspend activity has been made, a representative of the athletic department will announce via the PA system a notice to spectators of possible inclement weather and advising them to seek shelter in a closed, grounded structure.

**REMEMBER:** An automobile, golf cart, or open-sided shelter may not protect you from a lightning strike so these are not adequate shelters.

## RESUMPTION OF ACTIVITY

During practice, activity may resume under the following conditions. This decision will be based on:

- Thirty minutes AFTER the last lightning strike within a 3-8 mile range on the Sky Scan or Thunder Bolt Lightning Detector.
- Thirty minutes AFTER the last lightning strike within a 6-mile range using the Flash-to-Bang method. During a game situation the activity will resume once the Athletic Director, Athletic Training staff member and officials have conferred and the above criteria have been met.

#### DIRECTIONS FOR USING THE SKYSCAN LIGHTNING DETECTOR

1. Prior to practice or competition, monitor weather forecast via the Internet or by calling local agencies for up to date information.
2. Check for any National Weather Service-issued thunderstorm “watches” and “warnings”.
3. Monitor the weather for the following: sudden decrease in temperature, increase in air movement, sudden increase in humidity, visible dark clouds (though these do not have to be present for a lightning strike to occur)
4. Communicate with officials and/or head coach prior to activity about potential for bad weather and our monitoring system.
5. Locate the Sky Scan Lightning/Storm Detector in an area removed from other electronic devices or machinery, which could cause a false triggering.
6. The Sky Scan Lightning/Storm Detector is designed to work in a vertical position.
7. Turn the unit on, by depressing the on/off switch
8. Allow the unit to perform a self-check and make sure all lights are working correctly.
9. If you are using the AC Adapter, depress the “Battery Save” button twice to extend the life of the back up batteries.
10. Press the tone button to activate the warning tone. (This must be done every time the lightning detector is turned on.)
11. Set the range of detection by depressing the “Range Select” button until the 3-8 mile light is illuminated.
12. Each time the Sky Scan detects a lightning stroke it emits an audible warning tone for **1 second** (it is not very loud so if there is ANY chance of bad weather you must have the Sky Scan out where you can see and hear it).
13. Following the beep the Lightning Range Indicator column will light up for approximately 3 seconds. The single indicator corresponding to the range of the detected stroke will blink for approximately 25 seconds.
14. Activity will be suspended when:
  - The Sky Scan registers 2 consecutive lightning strokes within the 3-8 mile range
  - The Flash/Bang Method reveals lightning within a 6 mile range (30 second or less count between the flash of lightning and the bang of thunder)
15. Once you have determined that there is imminent danger of a lightning strike, communicate to the head coach and/or head official.
16. Evacuate the field and stands to an enclosed-grounded building. REMEMBER, a golf cart, automobile, or open shelter does not provide protection from a lightning strike. If there is no available shelter i.e., cross-country, each individual should

- see an area that is flat and in the open. Crouch down wrapping your arms around your knees and remain in that position until the danger of lightning has passed.
17. Activity may be resumed only IF the danger of a lightning strike is no longer present. This decision to resume activity is to be made by a member of the Athletic Training Staff, Athletic Director or Head Official.

## DIRECTIONS FOR USING THE PRO Thunder Bolt LIGHTNING DETECTOR

### **OPERATING POSITIONS**

The ThunderBolt® Storm Detector can be carried individually or installed on a stationary mount. The unit is completely operable while in its carrying pouch with easy access to all controls. Mounting the ThunderBolt allows it to be installed vertically on a flat surface, such as a desk or wall, allowing the unit to be easily removed for mobile operation. The ThunderBolt unit will not operate properly if oriented on its side. The unit is designed to operate either vertically (hand-held or using the wall mount or the desk stand), or lying flat on a horizontal surface.

### **UNIT POWER ON/OFF**

To turn on the unit, press the POWER ON/OFF button on the front of the unit (see page 1). The unit has been properly activated when the LED light at the tip of the unit flashes. Release your finger from the ON/OFF button after the LED light has flashed. Within a few seconds after the unit powers on, the ThunderBolt model number will appear on the screen, replaced by TONE IS NOW ON, and then the Main Menu will appear on the LCD display and the green LED light will begin to continuously blink to indicate normal operation. To turn off the unit, press the POWER ON/OFF button and hold until alarm sound is emitted, and then release the ON/OFF button at any time. This delayed deactivation prevents the unit from being turned off inadvertently by alerting the user.

### **1. STORM DETECT**

Once the ThunderBolt® is powered on and the Main Menu accessed, the unit will automatically return to normal storm detection (or SCANNING) mode if no other menu selection is made within approximately 7 seconds. You may also manually return to normal storm detection by selecting STORM DETECT mode and then pressing the ENTER button, immediately putting the unit into normal storm detection. Once the unit is SCANNING, the cursor will move back and forth, and the selected SENSITIVITY (normal or high) will be displayed.

### **2. ALARM RANGE**

ALARM RANGE allows the user to determine, based on need and/or application, what distance ThunderBolt will begin providing approaching storm warning on its VISUAL ALARM (red LED) and AUDIBLE ALARM (Tone). See page 26 for recommended settings. Selecting this option allows the user to choose the warning range (distance in miles from user location) for activation of the VISUAL ALARM and the AUDIBLE ALARM. Once ALARM RANGE has been selected, the VISUAL ALARM range will appear on the screen. The warning range values are selected by using the SCROLL UP/DOWN buttons to toggle the displayed range in miles to the desired value. Pressing

the ENTER button stores the value in memory. Once done, the AUDIBLE ALARM range will automatically appear on the screen. Follow the same procedure to select the value desired, and press ENTER to store in Memory. The unit will then return to the Menu. NOTE: Once stored, these ALARM RANGE values will be stored in memory each time the unit is operated until changed.

### **3. ALARM MODE**

This option allows for the setting of an additional trigger distance for an audible alarm with a faster tone rate, which may be extremely useful for certain applications. This feature allows the ThunderBolt® to automatically increase its alarm level as a storm approaches to a closer distance than the range selected for normal storm detection. To set the ALARM MODE, select ALARM MODE from the Menu, and follow the same procedure as the ALARM RANGE. Once the value has been stored, the unit will return to the Menu.

### **4. SENSITIVITY**

There are two storm detection sensitivity settings: NORMAL and HIGH (see the information following this paragraph for a description of each setting). Select SENSITIVITY from the Menu, and SET SENSITIVITY will be displayed. To set HIGH, push the SCROLL UP key. Or, to set NORMAL, push the SCROLL DOWN key. Then press the ENTER key. The setting is entered into the computer and the memory is updated. ThunderBolt then returns to the Menu, and then back to the SCANNING mode within 7 seconds if no further action is taken within the MENU.

**SCANNING SENSITIVITY NORMAL:** This setting produces the greater accuracy in storm tracking and speed calculation, but increases the time between a storm first being detected, and a calculated speed and Estimated Time of Arrival (ETA) being displayed.

**SCANNING SENSITIVITY HIGH:** This setting provides the fastest possible information, but sacrifices accuracy for speed. The information will gradually become more accurate as the unit gathers data. Use this option in situations where maximum warning time is required to prepare for storm arrival, or in certain indoor applications where the surrounding building may be reducing the signal strength.

### **5. NOISE TEST**

The purpose of the NOISE TEST is to detect and map the periodic, non-storm, Electromagnetic Interference (EMI) in the planned operating location for the ThunderBolt®, so that the unit only recognizes the electromagnetic activity of storm cells. There are numerous sources of electromagnetic energy that exist in our environment, such as computers and heavy machinery. Such non-storm related sources might result in electromagnetic interference and cause the ThunderBolt to false-trigger, subsequently displaying inaccurate readings. The unit contains special software routines for detecting and minimizing “noise” from EMI sources.

## FLASH-TO-BANG LIGHTNING DETECTION METHOD

This method of lightning detection should be used in conjunction with the SkyScan.

1. Prior to practice or competition, monitor weather forecast to include calling local agencies for up to date information.
2. Watch for the flash of lightning.
3. Begin to count (one one thousand, two one thousand . . . .)
4. Stop counting when you hear the bang of thunder.
5. Take this number and divide by 5. This will give you an approximation of how far away the lightning is (5 seconds = 1 mile). EXAMPLE: You see a flash of lightning and you begin to count. You reach 45 before you hear the bang of thunder.  $45 \div 5 = 9$ . The lightning would be approximately 9 miles away. Using this method you would suspend activity with lightning at or within 6 miles.
6. The National Severe Storms Laboratory recommends that by the time the spotter obtains a "flash-to-bang" count of fifteen seconds, all individuals should have left the athletic site and reached "safe shelter."
7. Activity is resumed with the permission of a member of the Athletic Training Staff 30 minutes after the last lightning detected at or within 6 miles.

### Lightning Detection Procedures for Athletes during Non Supervised Activities

Examples: student-athletes using facilities in the off season, or outside of regular practice hours

Lightning is a dangerous phenomenon. Athletic teams that practice and compete outdoors are at risk when the weather is inclement. The safest measure to take is to proceed indoors whenever you see thunderclouds forming and remain until the storm passes. Just because you cannot see lightning does not mean you are not at risk if you are outdoors. Other warning signs of impending bad weather include: sudden decrease in temperature, sudden change in humidity, increase in air movement, and visible dark storm clouds (though these are not always present during a lightning strike). The Athletic Training staff has a lightning detection policy in place for practices and games; however, we are aware that student-athletes often use LC's athletic facilities when there is no supervision by the coaches. In the event student-athletes are using the facilities without supervision, the Flash-to-Bang method should be used to monitor the proximity of the lightning. THE FLASH-to-BANG Method is an approximation of the distance of the lightning. NO METHOD OF LIGHTNING DETECTION CAN DETECT EVERY STRIKE.

### OTHER LIGHTNING SAFETY TIPS

1. There should be no contact with metal objects (bleachers, fences, golf clubs, bats)
2. Avoid single or tall trees, tall objects and standing in a group.
3. If there is no other shelter you may seek refuge in a hardtop vehicle. It is not the rubber tires that protect from lightning; it is the hard top metal roof that dissipates the lightning around the vehicle.
4. The existence of blue skies and/or absence of rain are not protection from lightning. Lightning can strike 10 miles from the rain shaft.
5. DO NOT LIE FLAT ON THE GROUND

6. Avoid using a land line telephone. Cell phones are a safe alternative if in a safe structure.
7. Avoid standing water and open fields
8. If in a forest, seek shelter in a low area under a thick grove of small trees.
9. If you feel your skin tingling immediately crouch and grab your legs and tuck your head as described above to minimize your body's surface area.
10. Persons who have been struck by lightning do not carry an electrical charge. Therefore, enact the EMS system and provide emergency care. CPR is what is most often required. If possible, move the victim to a safe location.
11. For additional information refer to the National Lightning Safety Institute at [www.lightningsafety.com](http://www.lightningsafety.com)

#### SCRIPT FOR CONVERSATION WITH OFFICIAL

Hello, my name is \_\_\_\_\_. I am a member of the LaGrange College Athletic Training Staff. I would like to speak with you regarding our lightning safety procedures. On site we have a lightning detector which I will use to monitor lightning. In accordance to NCAA recommendations, lightning detected within 3-8 miles is considered to pose an imminent threat. Per LC's lightning safety policy, when the lightning detector reveals 2 consecutive strikes within the 3-8 mile range OR the flash/bang method reveals lightning less than 6 miles we strongly recommend suspending activity until the danger of a lightning strike has passed. We have a communication system to inform all participants and any fans.

#### PA ANNOUNCEMENT DURING INCLEMENT WEATHER

May I have your attention? We have been notified of approaching inclement weather. Activity will cease until we have determined it is safe and the risk of lightning is diminished. We advise you to seek shelter as well. Thank you for your cooperation.