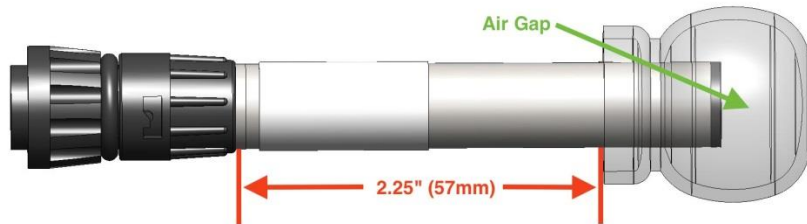


### For protection against weather

- Microphones should always be positioned so that they point slightly lower than horizontal. If you expect wind driven rain, it is advisable to point them even lower.
- Windscreens should be used for all deployments that could encounter precipitation. There is no reason to remove windscreens regularly. Always leave an air gap between the end of the mic and the windscreen as shown below. Windscreens should be used with the optional SMX-Horn also, but no air gap is required.



- Do not handle or remove a wet windscreen as it is easy to accidentally squeeze the windscreen and push water into the end of the mic

### For mechanical protection

- Mount the mic using a cable instead of directly on the recorder itself whenever possible. When used with proper strain relief, a cabled mic is less likely to be damaged by an animal hitting or sitting on it
- When disconnecting a mic from a cable or the recorder, turn the locking ring to unlock it and then pull straight away from the cable or recorder. Do not twist the mic itself.

### To avoid electrical discharge damage

- Avoid mounting microphones on tall plastic masts (e.g. fiberglass, nylon, etc.) for deployments in dry conditions because a breeze flowing over the plastic can build up a sizeable electrical charge much like rubbing a balloon. Eventually, the electric charge will be strong enough to discharge with an attraction to the mass of metal in the cable resulting in a spark that could damage the microphone. Instead, use wood or metal masts.
- If electrical storm activity is a possibility, you need to protect the microphone and equipment from damage from electrical discharge. If the best path to ground is through the microphone and/or Song Meter, then the microphone and/or Song Meter can be severely damaged. To protect against this, like a lightning rod, you need to create a better and safer alternate path to ground. One way to do this is to use a pipe clamp to clamp a heavy gauge (18AWG) wire from the microphone to ground (e.g. by securing the other end of the wire to the metal frame of a grounded tower structure, or securing the wire to a metal pipe planted 2 meters into the earth). The connections must be electrically strong (low resistance). A local electrician might be able to help you with a specific installation. Additionally, it is better to NOT ground the Song Meter or its power source so there is not a clear path to ground THROUGH the Song Meter.

### For best recording quality when using an ultrasonic microphone

- Test the mic when it is first received and regularly thereafter using an Ultrasonic Calibrator available from Wildlife Acoustics. This will allow you to quickly detect a loss in sensitivity
- Mount ultrasonic microphones away from all solid surfaces including the recorder itself, walls, ground, water tree branches and trunks and foliage to avoid recording echoes
- Position the mic in the middle of the bat flyway

### ATTENTION: SMX-U1 Microphone Has Built-In Gain

The SMX-U1 microphone has built-in gain and requires lower gain on the SM2BAT (+) than the SMX-US or SMX-UT. **We recommend you set 12 dB of gain on the SM2BAT (+) for normal recording conditions and 0 dB if you are very close to the bats to avoid clipping.** The gain is set using the jumpers on older SM2BATs or DIP switches on SM2BAT+s. If you need instruction, consult your Users Guide.