

# The End of the Starter's Pistol?

## **The Problem with Pistols**

One will never see a XC or Track & Field Starter without ear protection. That's because the 140-166 decibel blast of sound from a .22 or .32 starter's pistol is incredibly damaging to the ear. Starters know about the impending hearing loss that comes from exposing their ears to repeated impacts on their ear drums, but do the job anyway for their love of the sport; clearly not for the monetary compensation.

Standing, leaning or in the starting blocks usually not more than thirty feet away are our youth, high school, collegiate and professional athletes that don't think about the damage to their ears. Those athletes are focused on executing the race the way their coaches have prepared them to do. They are unaware that damage is happening to their ears as well.

Knowing that exposure to noises above 120 dB can cause irreversible damage to the human ear, it is surprising that parents, coaches, and athletic directors have allowed this to continue. With the development of electronic starting devices that generate an artificial gun noise or tone, there is now a better option to starting races. A tone is used in swimming and many tracks around the world but has yet to take hold in the vast majority of facilities across America. Two advantages of the tone are the sharp sound it generates, which may contribute to better reaction times, and the fact that it does not sound like a gun. Every campus in America could be gun free so when someone outside the venue hears the gun sound it can be quite concerning.

## **Advantages of Electronic Starting Devices**

These artificial sounds have three advantages. First, they are wired so that at the same time a sound is being generated, an electronic pulse is being created that is sent as part of a complete fully automatic timing system (FAT); Finish Lynx and Flash Timing for example. When using a starter's pistol, the sound generated is absorbed by a sensor that then creates the electronic impulse needed for the system. Those sensors have a long, and quite frustrating, history of not generating a signal at the firing due to prior wind or accidental contact. They also tend to not work when exposed to moisture. Any operator of FAT systems out there is nodding their head with dismay at this point because they have experienced those problems repeatedly.

Second, electronic starting devices speed up meets. Instead of starters having to reload every five or six races, they can be organizing runners in the paddock or moving to the location of the start for the next event. There is also the time lost from misfires or 'duds' that happen at least once during most meets.

Third, with electronic starting devices, the volume level can be adjusted to the needs of the venue. A dual meet on a light wind, empty bleacher early spring day may only need one medium size speaker to generate the 90 dB sound required by USATF (the only governing body that has established a minimum). Whereas, for a large invitational or championship, two, battery powered, high capacity speakers or more may be needed. Of over nine speaker manufactures tested, none generate sound below 90 dB and, more importantly, none generated sound above 120 dB.

### **Failure to Start**

It is clear that a change needs to occur, so one might wonder what *hurdles* are getting in the way. For *starters*, the culture of track and field is resisting change. This sport has become accustomed to the excessively loud blast of a starter's pistol. Coaches and athletes are used to the deafening blast of a pistol (possibly because they are in fact going deaf from it). Athletes will adjust to a quieter sound, they are athletes, they adapt to all training.

Another barrier is that coaches and spectators are used to the loud blast as a way to confirm the flash and smoke their eyes saw so they can start their watches or refocus their attention on the track. That need is gone. Thanks to FAT systems and the ability to instantly post times to display boards or the web, coaches and spectators can now focus on the athletes form or the competitiveness of the race.

One other obstacle might be the perceived cost of the electronic starting device, but that is unfounded. With a continual shortage of starter's pistol shells, the average high school meet costs a starter more than \$60 worth of ammo. Considering the average school pays just \$75, that's a final compensation of less than \$5/hour; hardly appropriate given the years of experience and expertise officials bring to a meet. A few manufacturers have been able to keep the price of electronic starting devices below \$300. This means that buying one will pay for itself in ammo in just five meets or less!

So where is the cost? Speakers. Good speakers, that have a long life battery, that can synch with other speakers to accommodate large venues and/or races like the 4 x 400 where runners are spread far apart necessitating multi-directional sound, and that have a wireless headset so officials can give instructions to runners, can cost as much as \$3000 for a quality set. Schools district could/should supply these speaker systems because they will know best what level of sound will be needed for the meets they host. Given the cost of possible lawsuits from former athletes who suffered hearing loss, that seems a small amount to pay. Besides, asking the starter, who is making \$5/ hour, to bring them seems pretty unacceptable. Plus, many schools likely have speakers already.

One final note is that not all electronic starting devices were created equally. The sound quality, battery life and precision of the pulse/sound generation all vary. Companies like Gill, Seiko, Omega, and VS Athletics have all created electronic

devices. It is time for Athletic Directors, Coaches, Parents, Athletes and Starters to make the change to safer, more reliable, faster and less expensive, electronic starting devices. The track & field world championships and last Olympics all used electronic starting devices. Is it time for America to catch up?

**-David Kuderka**

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