

Cover Story

W A L L W I R E D

Technology will help your game, and there are a host of places in the Met Area that are leading the charge into a brave, new world

BY JOHN STEINBREder

Mention technology, and the first thing most golfers think about is how advances in design and materials have so dramatically improved the equipment with which they play the game. But it has also had a significant impact on other aspects of the sport, and perhaps nowhere has that been more evident in recent years than in the areas of teaching and clubfitting.

High-speed cameras originally developed to measure the flight of bullets fired from guns are now used to break down golf swings for both teaching and fitting purposes, as are electromagnetic imagers that work in many ways like medical MRIs. Ultra-modern launch monitors instantly provide critical data regarding ball speed, launch angle and spin rates to better match players with irons and woods, and there are devices that can measure a player's head movement to one one-thousandth of an inch.

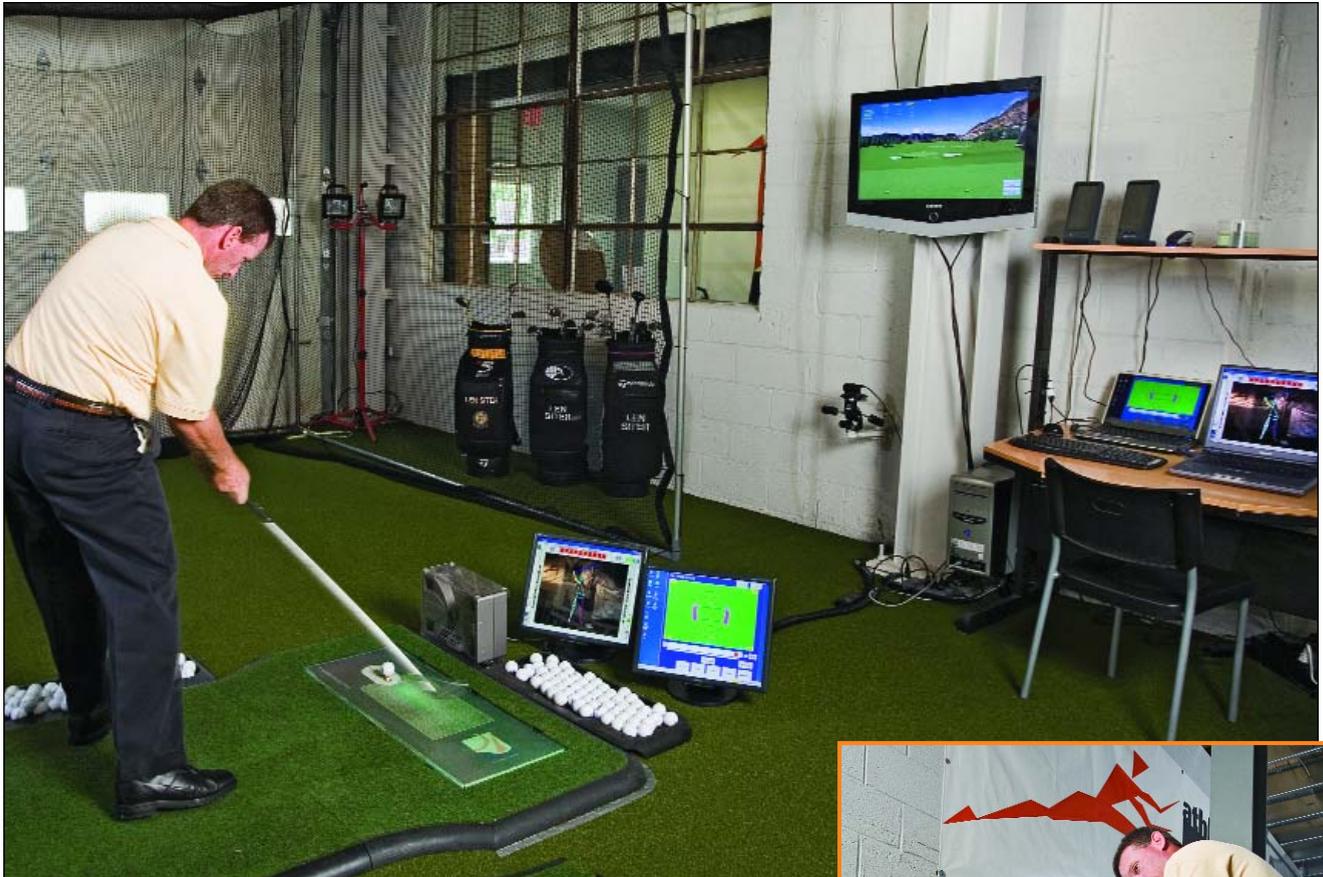
Places like the Callaway Golf Performance Center at the Neshanic Valley Golf Club in Branchburg, New Jersey look and feel as if they should be part of NASA research labs, so full are they of the latest gadgets and gizmos. This trend has already spread through our own backyard. In fact, technologically advanced golf facilities are ensuring that Met Area golfers have access to many of the same evaluation tools that PGA Tour pros use.

At GlenArbor (main photo), Rob Neal of Golf BioDynamics leads head pro Brian Crowell through a typical assessment. The tools of the trade at the Callaway Performance Center (inset).





JEFF WEINER PHOTOGRAPHY, INSET: RUSSELL MIRK/GOLF LINKS, BACKGROUND: BRANDY PICTURES.COM



Mountain Ridge head pro Len Siter also teaches at The Golfer's Edge in Scotch Plains, which combines fitness programs and instruction.

“The coolest thing about technology in this area is that it provides real value,” says Steve Pelisek, vice president of golf clubs for Titleist, the equipment manufacturer that has been a leader in developing this segment of the business. “The things that are accessible in terms of teaching, fitness and equipment diagnostics help us move from opinion to fact, so both pro and player know what is happening and how they can plot solutions.”

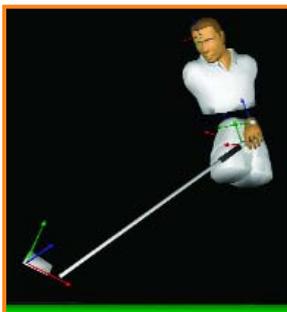
Such technological developments are especially welcoming to golf equipment makers who are hitting regulatory walls when it comes to things such as clubhead size or COR (coefficient of restitution, which is a way of measuring how energy is transferred between two colliding bodies, in this case a golf ball and driver face). In recent years, the companies have not produced new technologies or materials in the groundbreaking vein of, say, perimeter weighting or titanium heads. Consequently, the realm of teaching and fitting – as well as fitness – has come to represent a sort of last frontier, and stands as probably the best way through which golfers can currently increase their success, and provides golf companies a way to boost their businesses.

Fortunately for Met Area players, a number



of local PGA professionals and club-fitting technicians have invested time and money in bringing cutting-edge machines and measuring devices to their clubs and teaching centers. In fact, employment of equipment such as high-speed cameras and launch monitors is becoming *de rigueur* in many circles, and industry experts say it will only grow.

“From a standpoint of instruction, the video camera and all the things that come with it are the greatest tools at my disposal,” says Michael Breed, head professional at

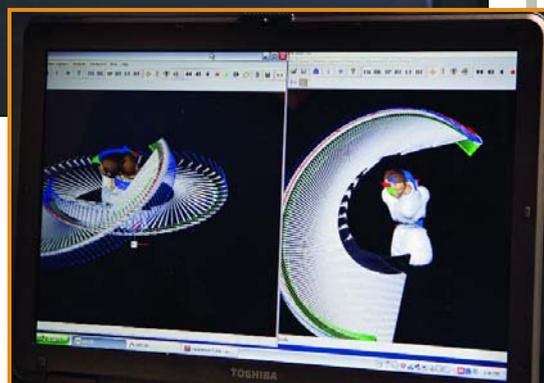


Members of Drive 495 in Manhattan can work on their games at computerized simulators.



Sunningdale Country Club in Scarsdale, N.Y. and a *GOLF Magazine* Top 100 Teacher. "When I started teaching in the mid-1980s and I tried to tell my students what they were doing, they frequently did not believe me. But video lets me show them exactly, and the better and more advanced the video equipment I am using, the more explicitly I can demonstrate to my students what is going on and what they need to do to improve."

As head professional at the GlenArbor Golf Club in Bedford Hills, N.Y., Brian Crowell also boasts an array of modern fitting and teaching equipment. He has two indoor hitting bays that are open year-round, with doors that open so members can practice in even the



most inclement weather. Each bay has four high-speed cameras to record swings for analysis from a variety of angles and also a software program that contains the swings of roughly 600 different touring professionals that enables Crowell to compare them with those of his students.

Even the Grass is High-Tech

Advances in technology are not only apparent in the world of instruction and club fitting. They have also had an impact on the way Met Area courses are maintained, and how local golfers play the game.

Modern mowers utilizing innovations such as floating head rotors have enabled maintenance crews to cut their fairways and greens much shorter than in the past. "And that means those surfaces are in most cases faster than ever before," says David Koziol, course superintendent for the Country Club of Fairfield in Connecticut, adding that one result of that is a tendency for

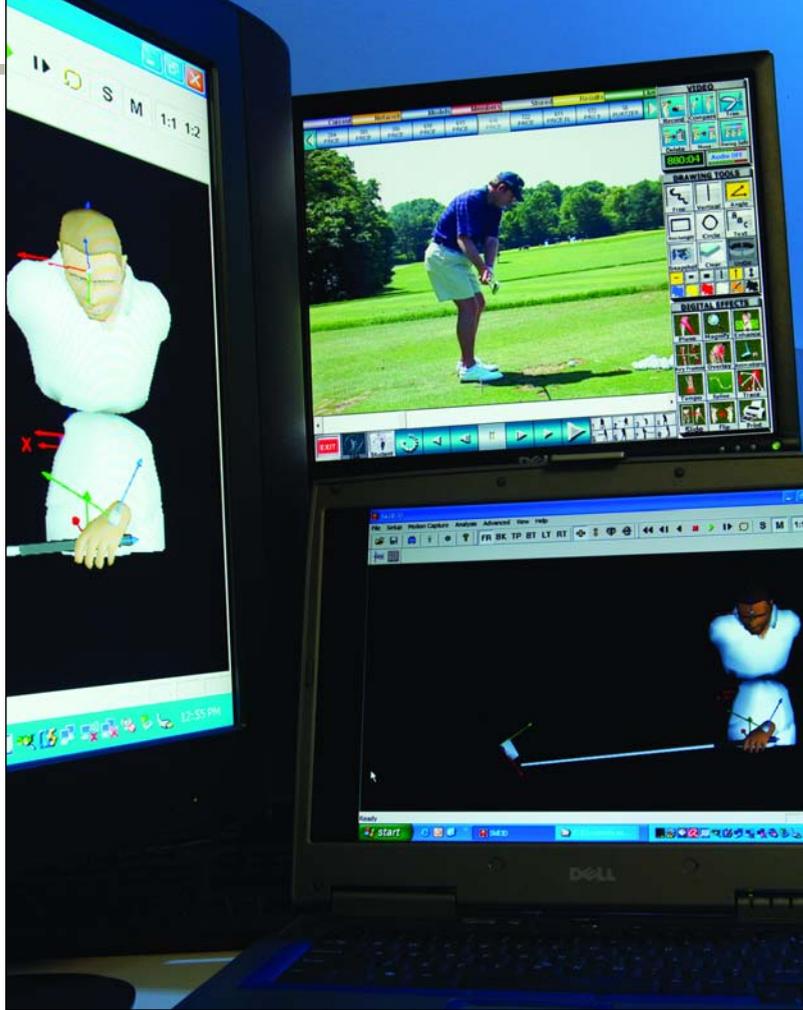


balls to roll farther on the fairways when they land, and sometimes roll right into trouble.

Dr. Bradley S. Klein, architect editor for *Golfweek*, says shorter fairways and tighter lies often give higher handicap players more difficulty with their shots. "I think that development has also contributed to the demise of the long iron because the ball is not sitting up as much, and you have to hit more of a sweep shot to get it airborne. And that is more effectively done with a fairway wood or hybrid club."

In addition, Klein says that clubs are using less water than in the past and managing that aspect of maintenance better today due to computerized irrigation systems that can be run with a Palm Pilot. "And that ability to use water more efficiently means superintendents rely less on chemicals in growing their grass," he says. "Which leads to a healthier golf course."

But that health can be tested when the weather gets hot and the grass gets stressed, especially when superintendents are being pushed to provide tournament-tough conditions (and green speeds) throughout the seasons. And no amount of technology can save fairways or greens that are pushed too far.



There is no position in the golf swing that escapes the view of cameras and diagnostic tools.

“There are so many ways this new technology helps us,” he says. “For example, I am able to keep data on every single student I teach, so we have notes and images we can refer to in future lessons. Also, members who are away for the winter or on a golf trip can record their swings and e-mail them to us here for analysis and help.”

Crowell has also arranged for a company called Golf BioDynamics to visit GlenArbor on a regular basis, an added bonus for members to experience yet another layer of technology. CEO Dr. Robert Neal hooks golfers up to a kit of belts, nodes and straps that provides a 3-D image of the golf swing. The software then allows the teacher to isolate where improvement is needed and if there are physical limitations that are preventing the student from reaching certain positions. Neal brings his portable technology to Met Area clubs during the summer, and is based at Jim McLean Golf Schools in Miami during the winter.

Crowell expects advanced technology to show up in an increasing number of golf facilities, be they public or private. “We are going to see more and more of these types of places because the systems make sense and provide so many services,” he says. “In many ways, I

cannot imagine teaching and fitting without them, and there are increasing numbers of pros who feel the same way.”

Fred Glass, the head golf professional and director of instruction at Neshanic Valley, feels much the same way. “With the way I teach, from impact backwards, I can see things so much better, and so much more clearly, with the modern technology we have at the Performance Center,” he says. “It also speeds up the teaching process because both teacher and student get better educated as to what is going on, and what needs to be changed with a swing.”

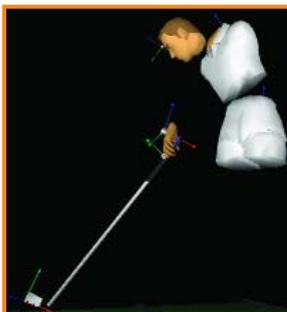
Glass has an impressive set-up at his place, including an indoor launch monitor driven by a pair of high-speed cameras that record and measure, for example, the plane of a swing, the angle of attack, the path of the club and the speed at which it is moving when it strikes the ball. And he finds it is just as valuable a tool for club fitting as it is for teaching.

“Basically, it is all because fitting allows you to find the club that works best for your customer,” he says, adding that he has conducted some 1,500 fittings since the Center opened in April 2005. “You can go back and look at how you have hit certain clubs in the fitting process. You can see where the club-face is at impact with specific irons or woods and how they are able to get the balls in the air with them. And as a result you are able to get the right clubs in their hands.”

Glass has also found that the technology he utilizes has helped him in the area of equipment sales as well. “It has dramatically changed the way I sell golf clubs, and made that process much easier,” Glass adds. “It’s rare that I sell an iron longer than a five-iron any more, and that’s largely because I can better show my golfers with this equipment how they are much more able to get a hybrid club into the air than, say, a three-iron.”

High-tech help is even available for those urban golfers who find it hard to get out of the city. And one of the best places to go in Manhattan for that is Drive 495 in Soho. That is where 26-year-old Joe Saladino, a top Met Area amateur player, and his older brother Dan have set up a two-floor operation. Downstairs is a 10,000-square-foot health club, and upstairs is a golf training center with three indoor simulators that not only allow visitors to “play” up to 40 different courses but also use the launch monitors and video cameras they contain, including a 3-D swing analyzer, to improve their games.

“We have five teaching professionals who



Met Area Tech Centers

Two of the facilities included in this article are for members only, so call the clubs for information on joining. For the others, call for appointment and pricing information.

- GlenArbor Golf Club (private), Bedford Hills, N.Y. (914) 241-0700
- Drive 495 (private), New York, N.Y. (212) 334-9537; www.driveclubs.com
- Callaway Performance Center at Neshanic Valley GC, Neshanic Station, N.J. (908) 369-1458
- The Golfer's Edge, Scotch Plains, N.J. (908) 322-2003

can assist people," says Joe Saladino, a Long Island native and St. John's University graduate who played on various mini-tours before regaining his amateur status. "And we work in conjunction with our health club in a very golf-related way. Our trainers will watch and interact with the golf professionals to develop fitness programs for our customers and help them strengthen their bodies for golf."

Technology in golf offers numerous entrepreneurial opportunities, and Ben Shear, who operates The Golfer's Edge in Scotch Plains, New Jersey, is a prime example. Shear had been a physical trainer and began working with golf pros. In particular, he formed a connection with Len Siter, head pro at Mountain Ridge, and they soon became convinced of the link between fitness and swing mechanics. "No one can tell you what you're doing [in the golf swing] without first getting a complete picture," says Shear. "Golf is part athletics, and how you move or how you transfer your weight are both affected by your physical limitations."

At The Golfer's Edge, Siter and Shear use DBS (Dynamic Balance System) technology and a three-dimensional image of a person's swing, and then match that against a physical screening. The full evaluation eventually helps them communicate exactly what someone should be working on, and whether they first need to improve their fitness to do it. One person who is convinced of the worth of this program is Al Small, the 2006 New Jersey Mid-Amateur champion and top Met Area player. "I'm positive that I wouldn't be swinging the way I am if I hadn't gone through that evaluation," says Small. "It ties everything together, both the physical and mechanical."

A more mobile option is the Fitting Works program offered by Titleist. Mobile because the ball and club maker has four vans, each equipped with PGA Tour-caliber fitting gear as well as a pair of technicians and an extensive selection of clubs. The vans travel in four separate markets each summer, New York/New Jersey among them, visiting facilities staffed by Titleist pros. Once they set up operations on a driving range, they employ what they call the Titleist Performance monitor to fit and fine-tune recreational golfers in much the same way they service their staff pros on tour. They gather

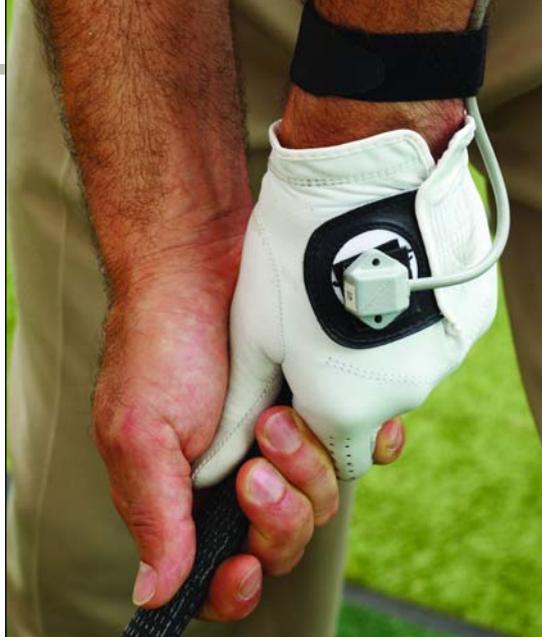
Now Flying By You

THE HOTTEST NEW SHAFT ON THE PGA TOUR.
MULTIPLE TOUR WINS. THE SHAFT OF CHOICE
FOR TOUR PROS THAT STILL HAVE A CHOICE.

Next Generation Micro Laminate Technology™

Carbon Nano-Tubes, combined with Aldila's proprietary A65 Performance Resin System, utilizing Advanced Ultra High Modulus Graphite Fibers, all synthesized into Micro Laminate Technology. Unparalleled performance and feel. The straightest, longest shaft Aldila has ever offered—with feel other shafts can't well touch

A student's hand, spine and head are all included in the high-tech evaluation process.

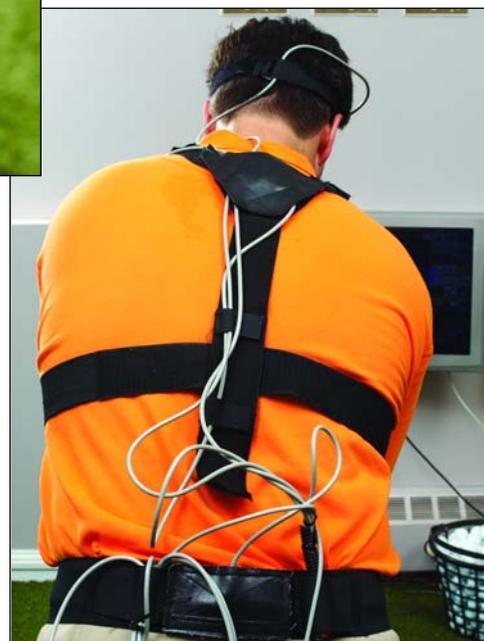


other tools of today's top teachers and fitters. They are born of the sort of extensive research and development that produced the sophisticated balls and clubs golfers use. And they give golfers the opportunity to tune their games like the pros – and the chance to play better than ever before. ■

John Steinbreder is a senior writer for *Golfweek* and a frequent contributor to *The Met Golfer*.

information on what balls and clubs work best for individual players, and the results are then stored on a website that the golfers, and the professionals from whom they buy their gear and take their lessons, can access whenever they want.

It has often been said with regards to the high-tech clubs and balls available today that no recreational athlete has it better than the modern golfer, for he or she is able to play superlative gear that was meticulously designed and made from very complex and high-performance materials. And in many ways, the same thing can now be averred about the launch monitors, high-speed cameras and



You Gotta Have These...

Techno-minded golfers have no shortage of gadgets and gizmos to choose from, and they cover all areas of the game, from apparel to instruction to entertainment. Following are four of the most interesting items on the shelves this year:

Suunto G6 Wrist-Top

Launch Monitor. In a product that evokes images of James Bond, this portable device is used to measure four distinct swing components – tempo, rhythm, backswing length and clubhead speed. Davis Love III is an endorser, and the real beauty of the Suunto monitor is that it can be used on the driving range, and then stored easily for your round so you don't violate the Rules of Golf.



Dunning Golf Performance Apparel. This Canadian clothing manufacturer touts its moisture management system as well

as its durability and built-in UV protection. The clothing is advanced because it utilizes premium technical fabrics such as Coolmax and Fieldsensor. The idea is to give its products, which are designed with direct consultation with PGA Tour players, performance qualities that are as strong as their good looks. A key attribute is how Dunning shirts enable golfers to keep cool and dry in warm weather, and the spring 2006 men's collection includes more than 400 styles and colors.

SureShot GPS. This handheld measuring tool makes it easier for golfers to figure out how far they have to the pin, and any other yardage they need on the golf course. Distributed in more than 20



countries, it features a backlit screen with a polarized filter and displays distances in either yards or meters. The SureShot GPS can hold as many as ten courses and be used on any course worldwide. In addition, layout maps can be downloaded from the company website, or players can do their own cartography with the device.

AboutGolf Indoor Golf Simulators.

These products employ the latest in sensor technology and golf software design for a number of uses, from fitting and teaching to forms of recreation or competition. More than 30 fully three-dimensional, real-time courses are available, including Pebble Beach and Spyglass Hill, and the systems enable players to track the entire flight of the balls they hit and enjoy crisper resolution and better detail of everything from water to wind.

