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driven to distraction

new golf products 2002

by David Buirski & Kay Turtle
With additional research by Harry Lifsec



While the effects of the increasing technological developments of both golf clubs and balls, and their impact on the game from both a professional and an amateur point of view, were hotly debated at Golf Europe 2001 held in Munich in October (see separate report), manufacturers were displaying their latest products to the golfing world.

Looking around the booths the eye-catching clubs, snazzy bags and rags, the latest golf balls and shoes were all attracting a good deal of attention. The 4,280 golf shop managers and sales personnel, club pros and their assistants, members of PGA Europe and authorised buyers from sports shops, departments stores and mail order business and associations who attended were also able to enjoy several business and information seminars.

Special interest was shown in the latest developments of clubs and balls with the manufacturers pushing the borders out to and beyond accepted limits. It is this continuous development of golf clubs and balls which is said to be rendering the design of golf courses all over the world obsolete as tee shots, in particular, fly ever greater distances, making many course hazards superfluous.

Probably the largest driver on the market at present is the XR-03 from Taylormade-adidas Golf. Made of titanium, it has a higher COR value (Coefficient of Restitution) than is acceptable for championship play in USA - USGA COR value is 0.83 - but does not prove a problem for golfers elsewhere. A steel driver in its 200 Steel series launched in October 2001, featuring the same state-of-the-art construction as the company's successful titanium 300 series and its fairway woods, does conform to the USGA values.

The 200 Steel's head size of 275cc is slightly larger than Callaway's Steelhead Plus at 200cc, which equals the volume of others in the same category (Ping 200cc, Adams 200cc, and Orlimar 240cc). The new trapezoidal sole pad design of 200 Steel supports the rolled face plate construction style, stiffens the overall structure, and works together with the head structure to increase ball velocity and provide superior feel and forgiveness. Updated graphite shaft designs are longer (44.5 ins) and lighter than previous models. Taylormade's 200 cast iron - a universal club - features an oversized head with a glass bead blasted

face and long blade, providing the best launch and spin of any of its clubs to date.

Upgrading its steel technology to reflect recent innovations, Taylormade's Retro line of fairway woods appeals to golfers who want the latest technology coupled with drivers of a more traditional size.

Presenting a new image with its W Staff series, Wilson introduced its improved Fat Shaft concept together with enlarged range of Deep Red clubs. The weight of these fairway woods is positioned further back in the clubhead, leading to an extremely low point of gravity, which gives a better launch angle, flight line and increased distance. The traditionally shaped head has a greatly enlarged sweetspot and an ultra thin face. Coupled with the translucent Deep Red finish this is an attractive addition to the company's drivers.

Building on the success of the Deep Red 305cc driver introduced in 2000, Wilson has this year added a 365cc Beta-Ti to its range. The fat shaft - so called as the shaft fits over the top of the hosel rather than inside it, reducing twist and torque - is available in both graphite and steel.

Presenting its latest products for 2002 in Munich was Calloway Golf whose Big Bertha club, introduced in 1994, caused waves throughout the golfing world as the unexpected trampoline effect was far and away its most interesting aspect - at least as far as most golfers were concerned. This led directly to the introduction of the USGA COR value.

While not detracting from that club and its benefits of distance and accuracy, Calloway has gone further using the same technology for its ranges for 2002. The Big Bertha C4 driver is a high velocity club using Compression Cured Carbon Composite (C4) technology generating explosive performance, strength and durability. The 360cc volume, which conforms to USGA values, improves clubhead stability while increasing the size of the impact face. An inner layer of tungsten-loaded urethane in the construction pushes 55 grams of discretionary weight to the outer perimeter, markedly raising the resistance of the clubhead to twisting on off-centre hits. The 46 inch shaft of this driver allows the golfer to increase the speed of the clubhead with less effort.

The latest Steelhead III drivers and fairway woods from



Above: Three clubs from the Steelhead Plus range by Callaway Golf.

Callaway - also under the Big Bertha label but in the 225cc category - build on the success of its Steelhead Plus range adding more distance and forgiveness. The patented VFT technology (variable face thickness), coupled with sophisticated casting and design, allows increased volume, resulting in longer, straighter shots off the tee. The 3-piece construction of the steelhead fairway woods combines a light-weight forged crown plate, cast face and body section and a precision-cast Variable Weight Chip position, i.e. the centre of gravity is ideally positioned in consideration with the length and loft of each club. This enables golfers to get the ball airborne quickly and easily, imparting the right amount of backspin and optimising trajectory and distance control.

A driver that even in wet weather is said to give excellent trajectory and distance is the latest BlueFire 310cc from Mizuno. Available in different lofts for men, women and left-handers, this club achieves its aims through an ultra thin face with worked in score lines to provide the necessary spin. Until now no company had managed to incorporate

Below left to right: The XR-03 Driver and 200 Series Iron from Taylormade-adidas Golf.









From left to right: The 'Giant' from HiPPO Golf; Tight Lies range of clubs by Adams Golf.

score lines on a such a thin clubface in the USGA non-conforming category. By using forged alpha beta titanium, which is particularly resilient but still maintains flexibility, and the CORTECH-3 design of three different thicknesses for the impact face, Mizuno engineers appear to have solved this problem. The grooves ensure that the ball maintains direct contact with the face, by preventing the formation of a film of water when it is raining. While still not acceptable in official championships in USA, the BlueFire driver certainly has its champions.

Another newcomer from Mizuno is Blue Rage 275cc - a steel driver which the company claims will put all titanium drivers in the shade. This driver is wider than present comparable drivers, has a thinner grooved hitting face which is at the same time more forgiving and permits optimum control in wet weather.

A new patent pending process called chemical milling technology (CMT), together with its proven TiSl technology (variable face thickness, nearly parallel top and sole, and elliptical backweight, JX hosel) has been combined in the latest driver from Ping - its TiSl Tec titanium driver. CMT removes the brittle alpha layer of the titanium casting and precisely controls wall thickness. This allows the positioning of weight pads on the sole plate towards the heel and toe. These optimise spin and lift characteristics, reduce spin and give greater distance.

An ET (Effective Trajectory) value stamped on the sole of the club represents the driver's effective loft at impact, a benefit to golfers of all skill levels. Eight combinations of lie and face angle to help control direction are available along with five ETs. Length remains standard at 45 inches. For all this, the driver is within the COR standards of the USGA.

The body of the Ping Ti3 fairway wood is made of investment cast titanium with a soleplate of zirconium - a sister element of titanium - and a tungsten bottom weight. These combine to lower the centre of gravity making the Ti3 easier to hit, while variable face thickness transfers more energy to the ball achieving greater distance.

The enormous amount of technology which has gone into the design and production of the latest golf clubs is perhaps not quite matched by the same in golf balls, but at Golf Europe 2001 certain things were apparent. It is predicted that wound balls will soon be a thing of the past and that the modern multi-layer balls, which drive and brake far better than their wound counterparts, are the future. It has been calculated that 80 per cent of playing professionals are already using the multi-layer ball.

This season saw the launching by Acushnet of its Titleist multi-layer ball Pro V1. The interest this generated has led to further models being introduced at Golf Europe for the 2002 season featuring the same extremely solid core as the Pro V1, with an ultra-thin, soft, slightly elastic and cut-proof cover "Fusa-Blend" from DuPont.

The thin winding of Maxfli's Revolution series golfballs, creates a buffer effect between core and shell. Building on its reputation the Maxfli A10, introduced at Golf Europe 2001, has a larger core, is ultra-thin, and the strengthened tungsten wound core effects spin and distance to advantage. In its Revolution solid ball, a further development from Maxfli, a special microfibre layer between core and urethane cover offers added distance with good control.

The secret of all four W Staff golf balls - the latest from Wilson - lies in their urethane core. This provides its driving force which controls speed and distance. Urethane has a softer feel and until now has only been used for the outer shell of the ball. Wilson's engineers have combined urethane with a very fast, hard rubber in its Pro Distance ball which reduced the compression and thus raising initial velocity and increase in distance.

Other major companies working on the wound core technology promise that will be introducing this type of golf ball at Golf Europe 2002. They are also looking forward to more space in a new venue for that show in the Exhibition Grounds at Munich-Riem, to be held from Saturday, September 29 through Monday, October 1, 2002.

technology or tradition
the debate goes on

There is probably not a golfer in the world who would not like to improve his or her game through the use of a wonder club or ball rather than - and that is what golf really comes down to - through practice, perseverance and a lot of thought.

This does not, of course, mean that using the most up-to-date equipment - multi-layer balls and trampoline-effect drivers - will not help one improve one's game...it almost certainly will, but not by itself.

Hotly debated at Golf Europe 2001, held in Munich recently, was golf's most important and controversial topic of the moment: are the new golf clubs in danger of destroying interest in the game, or are the balls flying too far?

The background to the controversy was the use in 1994, of titanium for the first time in a driver. This enabled the weight reduction to be off-set by a larger club head and hence a larger 'sweetspot', which enhanced rebound velocity of the ball - an entirely accidental effect of using this new material. The United States Golfing Association (USGA) pointed out the spring-like effect of the new driver was contrary to the ruling of 1909 which states that no spring effects may be employed in a golf club.

In open discussion with an audience of professional golfers and representatives of the trade entitled "Lengthen the course? Shorten the ball?" were Jaime Ortiz-Patino, president of the European PGA and owner of the Valderrama course in southern Spain which hosted the 1997 Ryder Cup, and Frank Thomas, former technical director of the US Golf Association, and inventor of the graphite shaft. Moderator was Andre Gorgemanns, secretary general of the World Federation of Sporting Goods Industries and executive director of World Sports Forum.

In 1998 the USGA introduced their COR value of 0.83 (coefficient of restitution), a ruling which meant that drivers above this value could not be used in competition in the USA. Golfing bodies in the UK, Europe and Japan, however, have not ruled out drivers of higher COR values.

Championing the cause of technological advantages in both clubs and balls, Frank Thomas stated that the driving average from the tee in 1968 was some 255 yards. In 2001 this had increased by only 23 yards - an increase of 1 foot per year until 1995 but with a significant increase of 7.2 ft being made in the past six years. Thomas added that, "the laws of physics, would not permit a COR factor of above 0.93" - at a factor of 1, energy would be produced causing the ball to rebound faster than the initial impact - which, according to Thomas, is not possible. He added that, "the ultimate increase now achievable could not be more than a further 15 yards...made up of five yards extra by the driver and ten yards extra through the latest developments in ball technology." This would mean that on some courses the fairways might have to be extended and some bunkers or water hazards repositioned, but in his opinion, this would not detract from the game. He recommended one set of rules for everyone from professional tournament players to recreational golfers.

Jaime Ortiz-Patino, who is an expert in golf course planning and an ardent champion for the traditional courses around the world not losing their popularity among the golfing fraternity, has appealed to golfing associations worldwide to join him in the campaign to preserve these courses with all their challenges. Not that Senor Ortiz-Patino is against the new developments in clubs and balls, far from it. Speaking at the seminar he said, "Clubs with the spring effect give a lot of pleasure to less accomplished players... but when it comes to the professional tournaments," he added, "it would be a pity if the game were reduced to just 'drive and pitch'."

Here he was referring to the professionals' use of the new drivers to keep the ball straight on the fairway, and particularly the increase in distance of tee shots, and to the increased technology in golf ball production which make the hazards on many of the traditional courses superfluous, and through this, the game less interesting to the viewer and spectator.

He continued, saying that golf has benefited through the "decent behaviour of the players and the beauty of the courses and both these factors are intrinsically worth preserving." For this reason, and in his personal opinion, "there should be two sets of rules, one for professional golfers and one for everyone else. This would then give such phenomenal players as Jack Niklaus no cause to exclaim that such courses as the Royal and Ancient Golf Club of St. Andrews are too short and thus 'an absolute joke' and from making such statements as 'we'll soon be teeing off downtown!'." Ortiz Patino added "that scores of 23 under par, for example, would not exist."

He further stated that the unions which govern the tournaments should not expect all the courses to meet only their criteria but that the professionals should "suffer along with the amateur."

Other questions asked during the debate concerned the possible need to modify the balls; the need to look at the design of future golf courses and the need to preserve the older ones; the importance of keeping golf tournaments entertaining and methods of keeping the interest in golf alive. A final plea from young golf professional, Andreas Düring, was that the "thoughts and ideas generating from the meeting...should be discussed further with the organisers of the four major tournaments, and that some relationship should be kept between amateur and professional golf to keep the game interesting to everyone."



In days past, 'local knowledge' meant a great deal. Let me illustrate this with a true story.

A famous golf journalist was playing his first round on the Old Course at St.Andrews with his future father-in-law. He was nervous - both about playing the course for the first time as well as trying to make a good impression. Before long, he needed some guidance. "What is the best line to the green?" he inquired and the reply was "Aim at the church steeple". Choosing his club with care, the young man hit a beautiful shot, dead on line, only to see it disappear into a deep pot bunker.

"Oh, bad luck," murmured the older man. "But you told me to aim at the church steeple," the younger golfer exploded. "Aye, that's right," came the reply, "the other steeple over there."

No need to ask who won the match but it is a perfect example of just how important local knowledge is - or, if the market for GPS systems really takes hold, was.

local knowledge in the palm of your hand

For those with long memories, who would have believed that the little 'sputnik' moving across the heavens back in 1957 would have eventually seen its technology converted into a GPS yardage calculator on your local golf course. Now you know - the space race did try to help improve your golf.

Today there are dozens of satellites orbiting the earth and there you are, a tiny speck on the par five down the road from your home, and as many as twelve of those mega-million dollar orbiting stations are pinpointing your exact position. With amazing accuracy, the little GPS (Global Positioning System) you're holding tells you exactly how far it is to the front of the green (and the water hazard between you and the green).

Then, armed with precise knowledge, you fluff the shot and the ball just makes the hazard! So much for science, you might say.

SkyGolf GPS is one of the systems offering golfers help to avoid such problems. The development company claims that its system is the first personal and fully portable GPS of its kind, running on a simple to use Palm OS operating system. Distances to multiple targets adjust automatically as you move. The handheld receiver is small and lightweight enough to be worn on a belt. Creating a GPS yardage book for your course is said to be easy: stand on any target and push a virtual 'mark target' button on your personal organiser. SkyGolf GPS then permanently records the precise latitude and longitude of your selected targets for future use. Its proprietary software combines with the US military's global positioning and targeting system to ensure accuracy - and it is at this point that one hopes that the military knows that your GPS receiver is purely for sporting purposes. SkyHawke Technologies, the company behind the SkyGolf GPS, specialises in developing innovative recreational positioning systems and is involved in the integration of GPS and wireless technology on multiple palm-sized computer platforms. Among the advantages claimed for the system are that there is no implementation cost, no cost to GPS-enable the course and no maintenance costs.



Above: SkyHawke Technologies, portable SkyGolf GPS system.

However, there is also XY Golf, based in Suwanee, Georgia, founded in 1997, which has its Flagman hand-held GPS system which has proved itself on courses covering some 500 acres with elevation changes up to 200 feet. The unit has a full colour display and will operate all day on one battery charge. Precise yardage and other pertinent information is available to both walkers and riders. Golfers using the Flagman remain in contact with the pro shop, allowing weather warnings and pace of play updates to be communicated to all, or specific, golfers.

The Proshot Golf Networks Inforemer GPS Golf system can be easily attached to golf bags, pull carts or motorised carts. The golfer hiring the unit in the pro shop has a choice of languages - English, Japanese, Spanish, French or Chinese. It features differential GPS on board, automatic present hole display, distance to pin and hazard and a host of other information systems. Once again, the golfer-benefiting device runs a complete golf course management system. Proshot Golf, now part of Inforetech Wireless Technology, is said to be the world's largest GPS golf company.

ParView adopts a different approach to the problem. Also using satellite transmissions, the Sarasota, Florida-based company provides accurate graphic hole and green overviews, exact distancing, professional tips, electronic scoring, a live tournament leader board, weather and safety messaging, two-way communication and even food and drink ordering facilities via the GPS video display system on the golf cart. There is a 10.4 inch diagonal in-cart colour screen, said to be the largest on the market, which allows the player to see what lies ahead, whether visible at the time or not. It also has a benefit for the club secretary because real-time tracking of the cart is available from the clubhouse. Besides advertising opportunities (is there no escape?) on the screen, the player, by keying in his or her e-mail address, can be kept informed of future events. ParView has also secured an exclusive international patent license agreement with PagiSat, LLC based in Tulsa, Oklahoma, and Pinranger of Australia, for the rights to all international golf industry-related GPS applications.

Notwithstanding, and joking aside, poor club selection and course knowledge are as big a problem for amateur golfers as flawed swing techniques. But the other real advantage in many of the systems lies in golf course management - while players may enjoy greater accuracy, managers should be able to provide better services for the players.

Targeting the 19th hole

The golf market is still a magnet for companies producing peripheral equipment without which the game would happily remain in its hide-bound traditional state. One such company is Smart21.com's with its golf game management line called CaddySolutions which includes Caddy4X digital scorecard, CaddyLinker download cable and CaddyLyzer, the proprietary software programme. Its CaddyLyzer II offers handicap calculation, graphic capabilities as well as stableford scoring. By simply taking the information from the Caddy4X and downloading it to your computer with CaddyLinker, the CaddyLyzer II eliminates the need for double entry of data while providing a myriad of statistics. It can merge multiple files so you can keep a single, ongoing record of your scores. Features such as scorecards, shot and score analyses and calculating greens in regulation and par saves are all available. All you need is the time to play your shots.



Above: The Stat Tracker II, designed to help focus your game on weak areas through statistical analysis.

None of these systems, however, will provide you with the ultimate golf weapon to destroy your opponent. That must surely be left to Stat Tracker II, considered by some as the hottest tech product for the past year.

The hand-held computer will deliver detailed information beyond your wildest dreams, allowing you to enter the following important statistics during your round: drives in fairway, greens in regulation, sand trap saves, penalty strokes, driving distance, up and downs, total putts and score. The Stat Tracker II G-100 computes, displays and stores the entered data as totals and percentages. You can review your statistical performance, as well as those of your playing partners, hole-by-hole, by completed round or by date! Its memory will hold 100 complete rounds and data for up to 100 players. It even adjusts 9-hole scores to reflect 18-hole statistics. (If only the game was that easy.)

Here we have the ultimate weapon for particularly cruel use at the 19th hole. Or - God forbid - you could even trot out the awe-inspiring and awful statistics of your opponents' past weaknesses on the first tee, rendering them psychologically incapable of playing a decent shot. Just as long as you don't remind yourself of your own on-course inadequacies.