

# BREAKMASTER

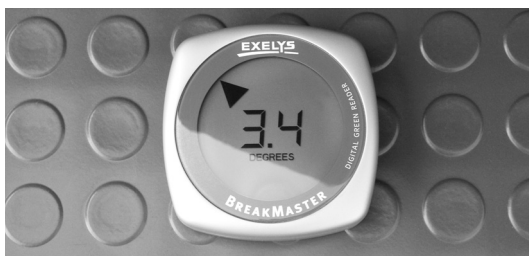
## DIGITAL GREEN READER

### Owners Manual



**EXELYS**





## THE REALITY OF BREAKING PUTTS

All golf greens are designed to slope to one degree or another to allow rainwater to run off. It is the slope of the green (and therefore the effect that gravity will have on the ball as it slows down) that is the single biggest factor in how much your putt will break on the way to the hole. As putting expert Dave Pelz puts it in Dave Pelz's Putting Bible:

"Measurements show that about 98 percent of putts have at least some break or curvature in their roll to the hole. The only putts that don't break are those that run straight uphill or straight downhill along the pure 'downhill' or 'fall line' direction of a green. Only about 2 percent of all putts line up purely along these lines."

For most of the distance of your putt, the force of your putter stroke is the determining factor on how the ball will roll. But as the ball slows down on its way to the hole, the power of your stroke has progressively less effect as the force of gravity takes over. This is why the ball breaks the most as it nears the hole.

*So how do you find the true break of a green?*

The value of reading greens by plumb-bobbing with your putter has been called into question by leading putting experts. Many putters just do not hang straight down in "plumb." And even if they do, you need to be practically laying down on the green in order to read the rim of the cup as a horizontal line intersected by the vertical plumb line of your putter.

A lot of times it's just not visually apparent which way the green is breaking, particularly if you're playing in a

hilly or forested area. Even if you can tell the general direction of the break, how much of an angle is it? Is it breaking a lot or just a little bit? You'll find there is a big difference between a 1.0 degree downhill break and a 3.0 degree break.

The fact is that most golfers usually just take their best guess and putt. Sometimes they hit, but frequently they miss breaking putts and learn nothing but frustration.

*That's why we created the BreakMaster Digital Green Reader.*

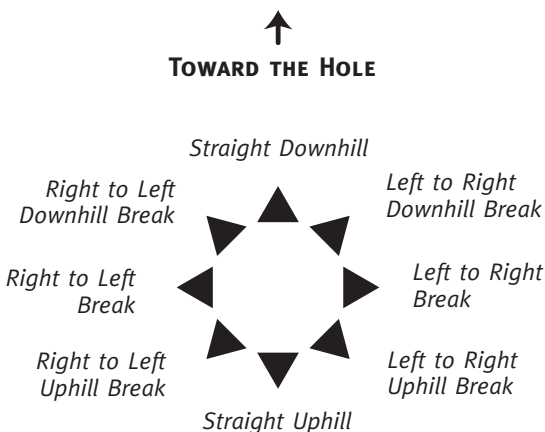
## HOW TO USE THE BREAKMASTER

The BreakMaster turns on by pressing the On/Off switch at the top of the unit.

Simply place the BreakMaster on the green near the hole on line with your putt. It doesn't matter which direction you orient the BreakMaster. There's no need to "aim" it, as it will work properly in any direction.

It takes just a second for the BreakMaster to settle and read the green.

**The arrow display on the BreakMaster shows the direction of downhill slope (the direction of the break) as indicated below.**



If two directional arrows are illuminated, this means that the direction of the break lies between the two. If all the arrows are illuminated, the surface is perfectly flat.

**The numeric display on the BreakMaster shows the amount (or severity) of break in degrees.** What's the significance in the number of degrees? The higher the number of degrees, the more significant the angle and therefore the more your ball will break. The BreakMaster reads up to 9.9 degrees – which is far beyond anything you will encounter on a golf green.

When you're finished reading the green, simply press the on/off switch to turn the BreakMaster off and conserve battery power. If you forget to turn the BreakMaster off, it shuts itself off automatically after two minutes.

## HOW MUCH WILL MY PUTT BREAK?

The BreakMaster will tell you accurate information about what's happening on the green that your eyes can never see: the exact break direction (downhill or fall line) as well as the exact amount or severity of break (shown as degrees of slope).

But once you have this information, what do you do with it? How do you put BreakMaster data into practical use to adjust your putt?

At Exelys, we've done extensive testing in real-world situations to find out how much putts will actually break at various kinds of slopes. We've tested on greens of different types (bent grass, Bermuda grass) at varying green conditions and with various popular brands of golf balls. The following table can be a useful general guideline to helping you adjust your putt.

<b>Break/Distance</b>	<b>3 Foot Putt</b>	<b>6 Foot Putt</b>	<b>9 Foot Putt</b>
1 Degree	4 - 6"	10 - 12"	14 - 18"
2 Degrees	8 - 10"	16 - 18"	22 - 26"
3 Degrees	10 - 12"	20 - 24"	40 - 46"
4 Degrees	14 - 16"	38 - 42"	52 - 58"

Note: all of these measurements were taken putting straight across the break, meaning at a right angle to the downhill line (the break or fall line) which is indicated by the arrow on the BreakMaster display.

As you would expect, for each degree of break, a putt will break more and more depending on the length of the putt. Therefore, putting across a 1 Degree slope (a fairly shallow break) can yield a break ranging from 4" for a 3 foot putt to 18" for a 9 foot putt.

Likewise, putting across a 4 Degree slope (a much more severe slope angle) can yield a break ranging from 14" to 58" (over 5 feet of break!) depending on the length of the putt.

## ADJUSTING YOUR AIM LINE

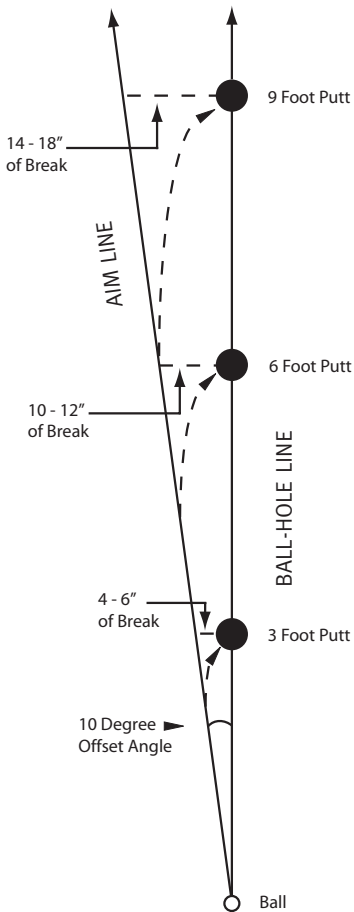
The drawings on the following pages illustrate the various readings from the table. You'll see that as the distance of your putt increases, you need to increase the amount of offset for your Aim Line. So for a 3 foot putt across a 1 Degree slope you need to adjust your Aim Line 4 - 6" from the hole to sink the putt, whereas if you were putting 9 feet across this same slope you'd need to adjust your Aim Line 14 - 18".

These numbers may change slightly depending on the speed of the green, and whether the green is wet or dry, so adjustments should be made to your putt according to these additional factors. We recommend entering these numbers in your Greens & Yardage Book to take out on the course with you.

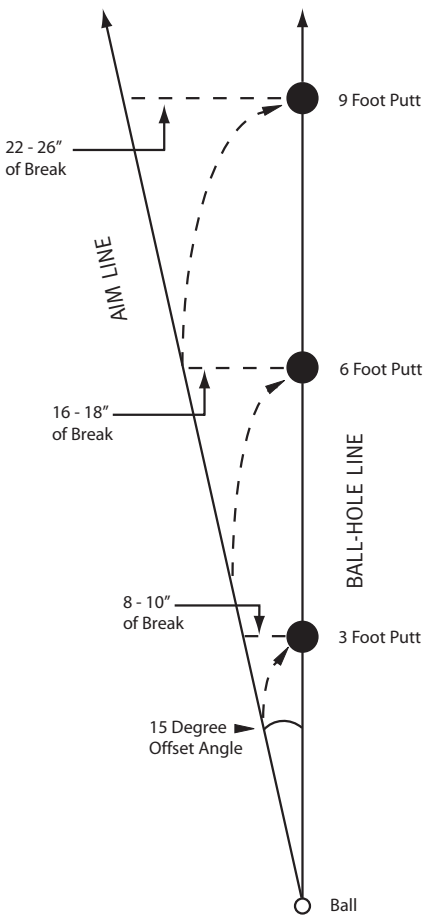
Another interesting factor that can be useful on actual greens is that the Offset Angle (meaning the amount you must adjust your Aim Line uphill from the cup) is consistent (for each degree of slope) no matter what distance you are putting.

<b>Break Amount</b>	<b>Offset Angle</b>
1 Degree Slope	10 Degrees Offset from Hole
2 Degree Slope	15 Degrees Offset from Hole
3 Degree Slope	20 Degrees Offset from Hole
4 Degree Slope	30 Degrees Offset from Hole

# 1 DEGREE LEFT TO RIGHT BREAK

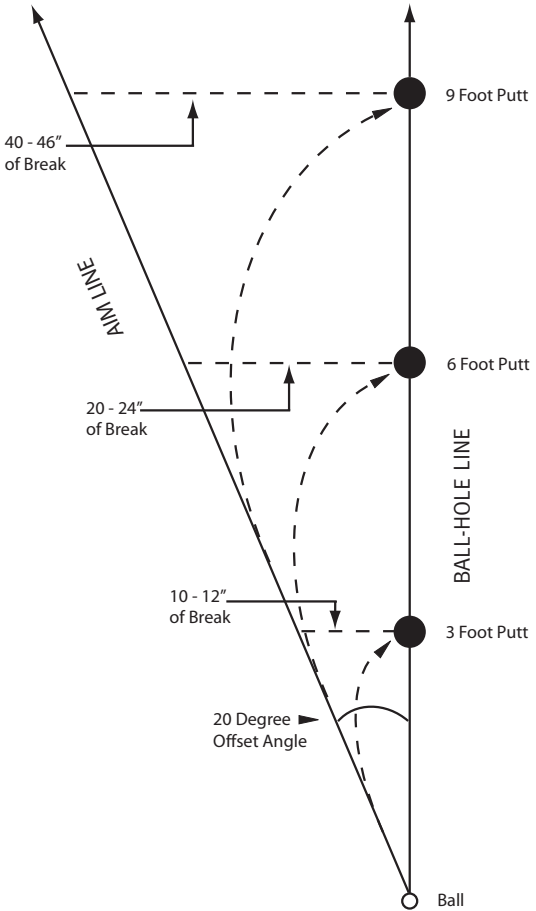


## 2 DEGREE LEFT TO RIGHT BREAK





# 3 DEGREE LEFT TO RIGHT BREAK



## UPHILL AND DOWNHILL

Not every breaking putt is going to be at exactly 90 degrees to the downhill break line. So how do you adjust the above numbers to fit these situations? Again, knowing the exact break direction (by using the BreakMaster) is infinitely preferable to merely guessing which way the ball might break.

By showing you the exact downhill break of a given putt, the BreakMaster allows you to see whether you're putting uphill across the break, or downhill across the break. Each of these putts will react differently, but in a predictable manner.

Uphill breaking putts will break LESS than putting straight across the break.

Downhill breaking putts (known as the "downhill slider") will break MORE than putting straight across the break.

So on the green, if you're putting uphill across the break, allow for a little less of a break. Likewise, if you're putting downhill, allow for a little more of a break than you would see in the numbers in the table.

The BreakMaster can show you the difference between a severe uphill or downhill putt, or one that is much closer to flat.

If it looks like you're facing a straight uphill or downhill putt, instead of placing the BreakMaster near the hole, place it just ahead of your ball on line with the hole. Then read the angle and direction on the display. If you're putting straight uphill, the arrow will point to you. If you're straight downhill, the arrow will point toward the hole. The numeric display reveals the severity of the uphill or downhill slope and gives you a good indication of how much to adjust the force of your putt.

## HOW BREAKMASTER TRAINS YOUR EYE

To become better at hitting breaking putts, you've got to know how the break affects the roll, and practice accordingly. We suggest you use the BreakMaster during a practice round or during practice sessions on the putting green.

As you walk to your ball on the green, line up your putt by eye as you normally do. See if you can detect by sight (or past experience) which way the green is breaking.

Once you think you've read the green properly, turn on the BreakMaster and place it near the hole on line with your putt. The best time to do this is when you go to take out the flag.

Have you sighted the break correctly? The BreakMaster tells you the answer.

Next, make your putt, and see exactly how much effect different kinds of breaks have on the path of your ball.

Rather than learning more about the frustration of missed putts, the BreakMaster will teach you more about the mechanics of the game.

## GREENS AREN'T PERFECT

Unfortunately, greens surfaces aren't always perfectly flat. Little bumps from ball marks, footprints, irregular grass growth or mowing can affect the readings you get from the BreakMaster. The BreakMaster is a highly accurate device that will tell you exactly the reading under its bottom surface. But if the greens surface is irregular, we suggest that you don't rely on just one reading. Move the BreakMaster around a little within a 12 - 24 inch area and take two or three readings. Average them out and you've got a good idea of how much break exists near the hole. This should only take a few seconds as the BreakMaster is extremely fast at reading the angle.

Sometimes, if the greens surface is nearly flat (or under 0.5 degrees) the arrow display on the BreakMaster may even indicate differing directions of break within the same area. This is normal and essentially tells you that

the break is so shallow you can pretty much putt straight at the hole without being affected at all by the break.

The effect of the angle of breaks on your ball will also vary depending on the hard/soft or wet/dry nature of the particular green you're playing.

Generally, hard or dry greens will give you a faster roll, soft or moist greens will give you a slower roll. The faster the green, the more the putt will tend to break. Conversely, the slower the green, the less the putt will break.

## **BREAKMASTER TIPS**

The BreakMaster isn't intended for use in golf competitions. It's a training device that is designed to help you train your eye to better read greens (much like a range finder helps you understand distances). So we certainly don't recommend that you try to sneak the BreakMaster into your competition rounds. However, there's nothing illegal about reading the greens before a competition and making notes on how the greens break in a yardage book.

We'd also like to suggest that you don't keep the green reading information to yourself. Share the information with the others in your foursome and we guarantee that as they make more breaking putts, you'll make friends. In this way, the BreakMaster will also speed up play because there's no question in which direction the green is breaking.

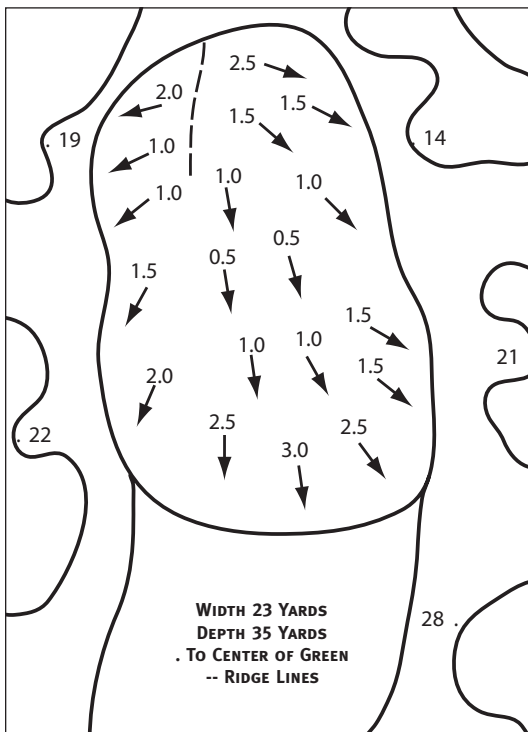
Also, watch your pace. We want to encourage you to use the BreakMaster often, but beware of taking excessive measurements all along the line of your intended putt. One or two quick measurements near the hole should give you enough information to adjust your aim line and sink your putt.

But if someone should comment, feel free to use this line that we "borrowed" from Paul Trittler in Golf magazine: "Green reading doesn't slow the pace of play; three-putting does."

## HOW THE PROS USE THE BREAKMASTER

Since its introduction, the BreakMaster has been used by literally thousands of golf professionals: from Tour Pros on all the major professional golf tours, to professional golf instructors to Rules Officials who use the BreakMaster to choose the best hole positions for golf tournaments.

Tour Pros don't just guess the break before they putt, like average golfers do. They work with their caddies to map out the greens beforehand and plan each shot. This gives the Tour Pro and his caddies way more information than the average player has and they use that information to plan their putts as well as their approach shots to the green. The map below is an example of how Tour Players plot out golf greens before tournaments.



One of the best ways to use the BreakMaster is to help you create these kinds of greens maps for the courses that you play. The DVD that is packaged with this BreakMaster can show you how to use many of the satellite services found on the Internet to help you create your own unique greens maps and yardage books for the courses you play. We strongly recommend that you view the DVD. This definitely will get you playing and mapping greens like the pros.

## TROUBLESHOOTING

The BreakMaster is sealed to be moisture resistant, but be careful not to immerse it in water. If it gets damp from being on the green, simply wipe it off with a dry towel before putting it away.

The BreakMaster is sturdy, but it's not indestructible. If you store it in your golf bag, make sure that it is protected from being crushed by clubs, golf cart, etc.

**Battery Replacement:** Under normal use, batteries should last one year if you play a round or two a week. When the batteries are getting low, the battery indicator will illuminate on the display. Replace the batteries with two SR44 (357) watch batteries (readily available at drug stores or electronic stores).

## BREAKMASTER SPECIFICATIONS

**Display:** 0.0 - 9.9 degrees (in 0.1 degree increments)

**Accuracy:** +/- 0.2 degree

**Directional Indicator:** Indicates downhill in 16 directions

**Dimensions:** 3 3/16" (w) x 3 3/16" (d) x 1" (h) (80mm x 80mm x 25mm)

**Weight:** 3.9 oz. (110 g)

**Power:** 2 x SR44 (357)

## LIMITED WARRANTY

This Exelys product is guaranteed against defects of material and/or workmanship for a period of one year from the date of purchase. Should your Exelys product fail to operate during this period, return it, postage prepaid, to Exelys Customer Service. If your product has not been abused, altered or tampered with, we will, at our option repair or replace it without cost to you during this warranty period. This warranty is valid for the original purchaser and only if returned with a copy of the original sales slip and a description of the difficulties encountered. The liability of Exelys LLC shall be limited to the rectification or replacement of faulty apparatus and shall not be extended to any consequential damage.

## DECLARATION OF CONFORMITY

Exelys BreakMaster. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 91) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Responsible Party: Exelys, LLC.

## CUSTOMER SERVICE

We encourage you to register your product with us by going to our website:

[www.exelys.com/productregister](http://www.exelys.com/productregister)

or by calling us at the phone number below.

Feel free to contact us with questions/comments or in the event your BreakMaster isn't working properly.

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