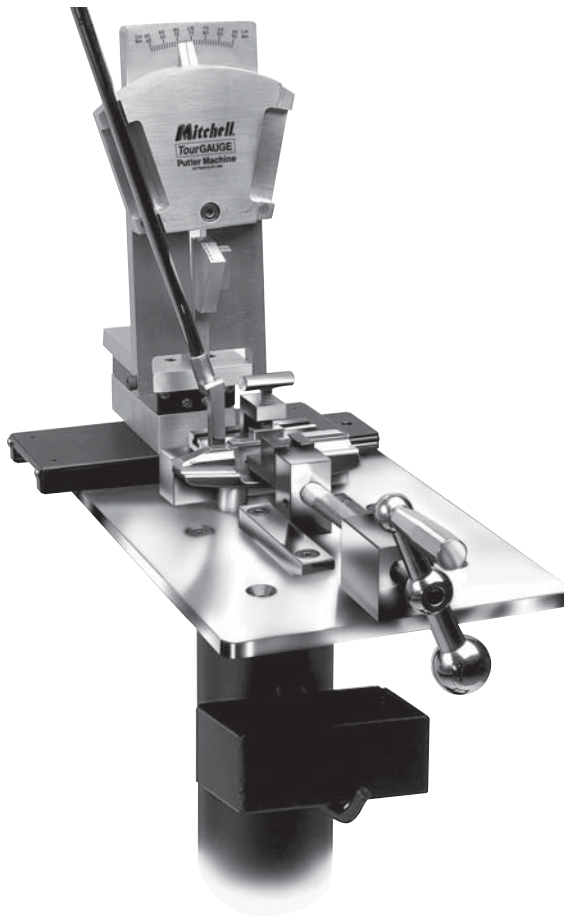


Tour GAUGE[™] **Putter Machine**

Operating & Maintenance **MANUAL**



TourGAUGE™ Putter Machine

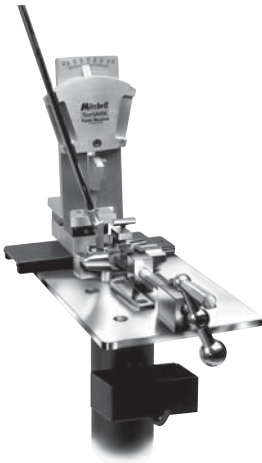
U.S. Patent No. 5,421,098



“Thank You for purchasing the golf industry’s state-of-the-art **TourGAUGE™ Putter Machine** . You should find it simple to operate. Please follow the instructions in this manual. If you have any questions, please call 1.800.437.1314.”

-Ed Mitchell

IMPORTANT NOTICE



Your **TourGAUGE™ Putter Machine** is a precision gauge.

When measuring a particular putter in your **TourGAUGE™ Putter Machine**, the angle readings are correct. When these angle readings are compared to the published standards for that putter and are found to be different, then that particular putter does not meet those standards.

If you compare the loft/lie angles of a particular putter measured in other machines to a **TourGAUGE™ Putter Machine** there may be a difference. That is because some machines do not adjust for offset, progressive offset, non-offset, or face progression hosel positions and therefore give inaccurate and inconsistent readings. You can measure any putter in a **TourGAUGE™ Putter Machine** accurately.

“THE INDUSTRY STANDARD FOR ACCURACY™”

GUARANTEE

All products manufactured by Mitchell Golf Equipment Company are guaranteed against defects and workmanship. Replacement or repair will be at the discretion of Mitchell Golf Equipment Company.

©2003 Mitchell Golf Equipment Company

This **TourGAUGE™ Putter Machine**
Was Manufactured For:

Purchased By: _____ Date: _____

Serial #: _____

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

INDEX

PARTS	2
PUTTER FITTING GAUGE	3
PUTTER HEAD REGISTRATION & CLAMPING	4
CLAMPING ILLUSTRATIONS	5
MEASURING LOFT/LIE ANGLES & LEFT HAND OPERATON.....	6
ADJUSTING LOFT/LIE ANGLES / PUTTER WITH HOSEL	7
ADJUSTING LOFT/LIE ANGLES / NO HOSEL PUTTER	8
ADJUSTING LOFT/LIE ANGLES / CENTER SHAFT PUTTERS	9

MAINTENANCE

1. Occasionally wipe with clean cloth.
2. Occasionally apply grease to the threaded **Front Worm Screw** (#10).

TECHNICAL ASSISTANCE

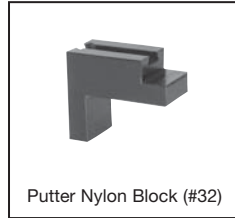
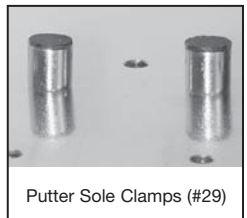
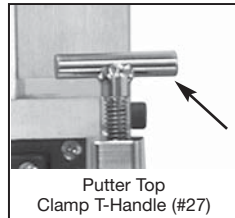
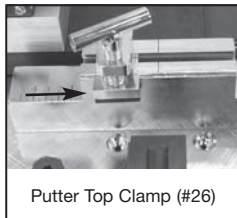
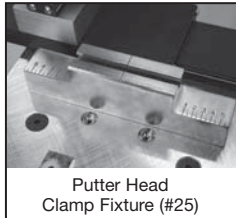
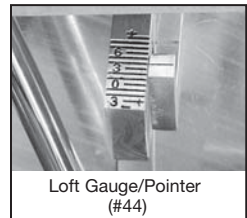
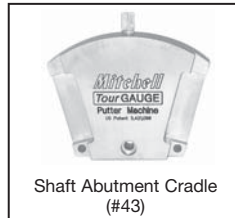
Call 1-800-437-1314 Monday – Friday 8:00 a.m.- 5:00 p.m. Eastern Time

EMAIL: info@mitchellgolf.com

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

PARTS



Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

Putter Fitting Gauge

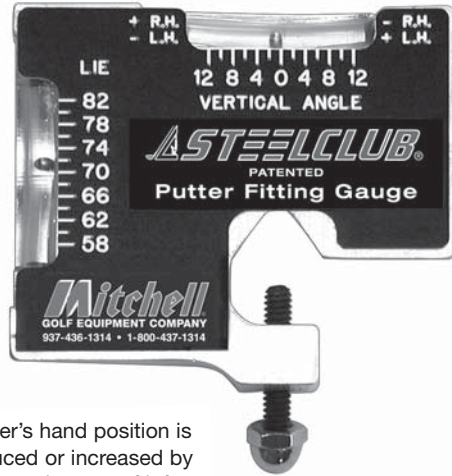
STEP 1 Attach **Putter Fitting Gauge** (#33) to putter shaft just below the grip.

STEP 2 Align **Putter Fitting Gauge** (#33) so that the top edge (vertical angle) is perpendicular to the putter face. Finger tighten to shaft.

STEP 3 Have player address a golf ball in desired position.

STEP 4 Read the golfer's ideal lie angle from the lie scale.

STEP 5 Read the golfer's vertical hand position from the vertical angle scale. If the gauge reads "0" degrees, then the golfer's hand position is not influencing the actual putter loft. If the golfer's hand position is forward or behind "0" degrees, then the putter loft is reduced or increased by the amount shown on the scale. Example: If the putter has 5 degrees of loft and the golfer's hand position is 2 degrees forward, then the golfer has reduced the putter loft to 3 degrees. It is recommended that you suggest the golfer change his/her hand position to the "0" degree vertical position. However, if the golfer insists on maintaining their normal hand position, then the putter's loft should be adjusted to achieve the ideal loft, giving consideration to the golfer's hand position. To adjust putter lofts, see recommended putter lofts for putter styles and putting green conditions.



Recommended Putter Lofts

PUTTER DESCRIPTION	SLOW TO MEDIUM SPEED GREENS	
		FAST GREENS
NO OFFSET	3° - 4°	2° - 3°
SLIGHT OFFSET	4° - 5°	3° - 4°
OFFSET	5° - 6°	4° - 5°

GENERAL GUIDELINES

1. The more offset in the putter the more loft needed.
2. The slower the greens the more loft needed.

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

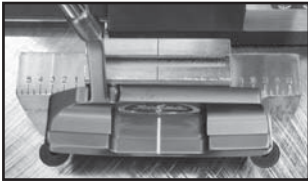


Illustration 1 –

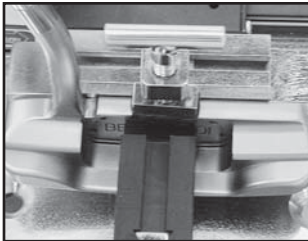


Illustration 2 –

Putter Head Registration & Clamping

STEP 1 Register putter head by placing putter head face against **Putter Head Clamp Fixture** (#25) with sole touching both **Putter Sole Clamps** (#29). Align putter head center mark (*if available*) with centerline on **Putter Head Clamp Fixture** (#25) or center putter head on the progressive scale of the **Putter Head Clamp Fixture** (#25) so it measures equally to right and left of “0”. See Illustration 1.

STEP 2 Position **Putter Nylon Block** (#32) on **Nylon Block Holder** (#42).

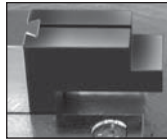
NOTE: The **Putter Nylon Block** (#32) has two different cuts allowing for use with different putter shapes, i.e. cavity back, flange back, mallets, etc. See illustrations on page 5.

STEP 3 Clamp putter head in machine by turning **Front Worm Screw** (#10) to tighten **Putter Nylon Block** (#32) against back of putter head. Slide **Putter Top Clamp** (#26) to center of putter head and finger tighten by turning **Putter Top Clamp T-Handle** (#27). See Illustration 2.

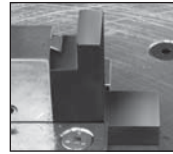
Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

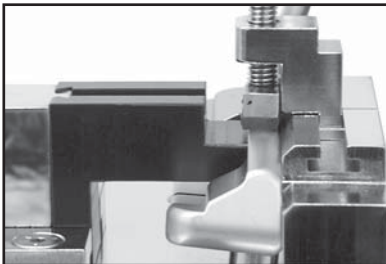
Putter Nylon Block Clamping Instructions



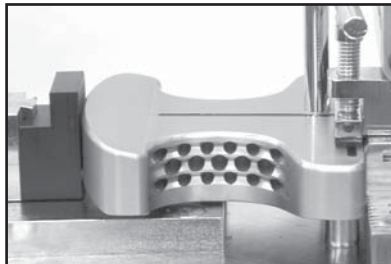
Block Position 1



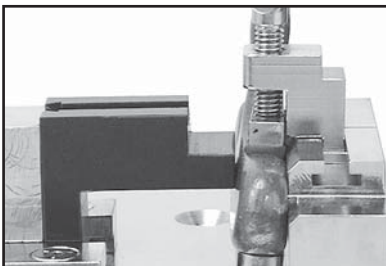
Block Position 2



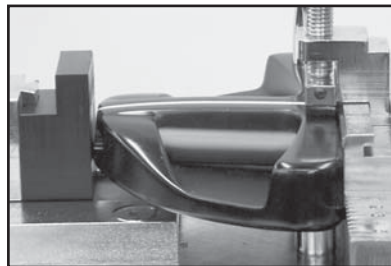
Cavity Back Putter
Block Position 1



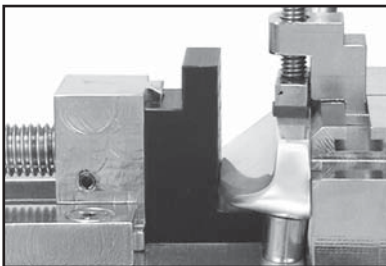
Mallet Putter #1
Block Position 2



Blade Putter
Block Position 1



Mallet Putter #2
Block Position 2



Flange Back Putter
Block Position 2



Mallet Putter #3
Block Position 1

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

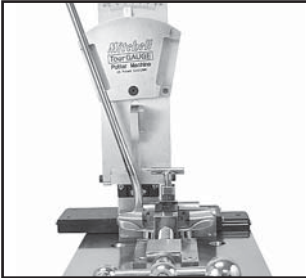


Illustration 3 –

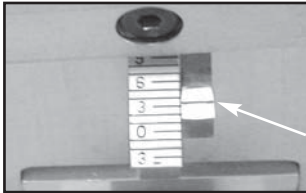


Illustration 4 –

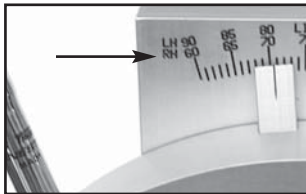


Illustration 5 – Right-Hand Putters

Measuring Loft/Lie Angles

STEP 1 To read the loft and lie angles, slide the **Putter Loft/Lie Angle Gauge Assembly (#7)** forward and to the side until you are able to make contact with the shaft by the **Shaft Abutment Cradle (#43)**. The vertical **Putter Lie Angle Gauge Plate (#23)** tilts forward and the **Shaft Abutment Cradle (#43)** rotates to allow the shaft to lay flush against both walls of the **Shaft Abutment Cradle (#43)**. Two magnets hold the shaft against the **Shaft Abutment Cradle (#43)**. See Illustration 3.

STEP 2 Read the loft on the **Loft Gauge/Pointer (#44)** directly in front of the **Putter Loft/Lie Angle Gauge Assembly (#7)**. See Illustration 4.

STEP 3 Read the lie angle on the lie scale at the top of the **Putter Lie Angle Gauge Plate (#23)** indicated by the pointer of the **Shaft Abutment Cradle (#43)**. Read the lie angle for right-hand putters marked “RH”. See Illustration 5.

Left Hand

To measure and bend, repeat the same steps per instructions on pages 4 through 6. Read the loft per Step 2 above. See Illustration 4. Read the lie angle per Step 3 above. Use scale denoted by the “L.H.” on the **Putter Lie Angle Gauge Plate (#23)**. See Illustration 6.

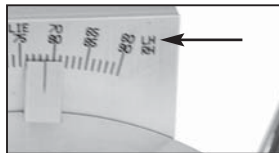


Illustration 6 – Left-hand Putters



Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

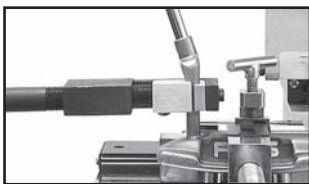


Illustration 7 –

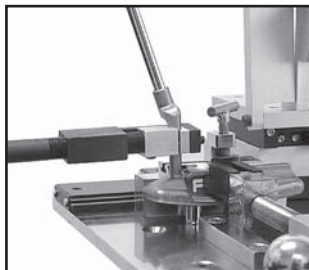


Illustration 8 –

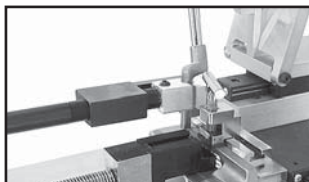


Illustration 9 –

Adjusting Loft/Lie Angles Putter With Hosel

STEP 1 Slide **Putter Loft/Lie Angle Gauge Assembly (#7)** back and to side of machine. Place the **Adjustable Putter Aluminum Bending Bar (#34)** on hosel as high as possible. Adjust bar to snug fit (finger tight) by turning handle of bar. See Illustration 7.

STEP 2 To bend hosel apply light pressure to bending bar in the direction of desired bend until it is seated firmly against hosel. Apply short, quick jolts of bending pressure to bend hosel. Re-measure putter and re-bend if necessary to desired angles.

STEP 3 To adjust lie angle bend up to make more upright and down to make flatter. The shaft should move in a plane parallel to the front of the machine. See Illustration 8.

STEP 4 To adjust the loft angle, bend back (up) to add loft to putter and bend forward (down) to de-loft putter. The shaft should move in a plane parallel to the side of the machine. See Illustration 9.

NOTE: *Investment cast, forged, and machined putters made from steel, bronze alloy, brass or aluminum can be adjusted. It is not recommended to bend zinc or sand cast putters.*

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

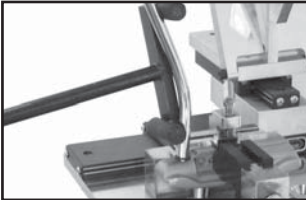


Illustration 10 –



Illustration 11 –

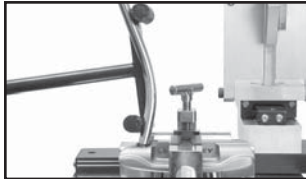


Illustration 12 –

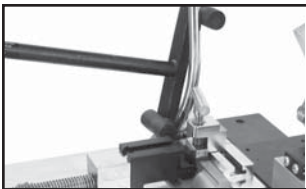


Illustration 13

Adjusting Loft/Lie Angles No Hosel Putter

STEP 1 Slide **Putter Loft/Lie Angle Gauge Assembly (#7)** back and to side of machine. Place **Putter Shaft Bending Bar (#35)** on shaft at the double or single bend. Position the top shaft post of bending bar on one side of the shaft and the bottom shaft post on the opposite side of shaft. The shaft bend should be between the two shaft posts of the **Putter Shaft Bending Bar (#35)**. See Illustration 10.

NOTE: *The top shaft post of the Putter Shaft Bending Bar (#35) should be positioned on the side of the shaft in which the bending pressure will be applied.*

STEP 2 To bend shaft, hold the end of the **Putter Shaft Bending Bar (#35)** with one hand and place the other hand around the two shaft posts and shaft. This will secure the **Putter Shaft Bending Bar (#35)** on shaft and will concentrate the bending pressure between the two shaft posts. Apply light pressure to bending bar in the direction of desired bend. Then apply short quick jolts of bending pressure to bend the shaft. Re-measure putter and re-bend if necessary to desired angle. See Illustration 11.

STEP 3 To adjust lie angle bend up to make more upright and down to make flatter. The shaft should move in a plane parallel to front of the machine. See Illustration 12.

STEP 4 To adjust the loft angle bend back (up) to add loft to putter and bend forward (down) to de-loft putter. The shaft should move in a plane parallel to side of the machine. See Illustration 13.

Tour GAUGE™ Putter Machine

U.S. Patent No. 5,421,098

OPERATING INSTRUCTIONS

Registering & Adjusting Loft/Lie Angles Center Shaft Putter

STEP 1 Follow steps 1 & 2 on page 4 for registering & clamping putter head. Except when registering, do not use **Putter Top Clamp** (#26). Make sure putter face is flat against **Putter Head Clamp Fixture** (#25).

STEP 2 Measure loft/lie angles of putter following steps 1 thru 3 on page 6.

STEP 3 To adjust loft/lie angles, slide **Putter Top Clamp** (#26) towards center of putter head allowing enough room for bending bar to be attached to shaft and finger tighten by turning the **Putter Top Clamp T-Handle** (#27). See illustration 14.

STEP 4 Read the loft/lie angles again to see if they changed after tightening the **Putter Top Clamp** (#26).

STEP 5 Adjust the loft/lie to desired angles allowing for any difference in the readings after tightening the **Putter Top Clamp** (#26).



Illustration 14 –

Mitchell[®]
GOLF EQUIPMENT COMPANY

954 Senate Drive
Dayton (Centerville), OH 45459
Phone 937.436.1314 • FAX 937.436.1325
800.437.1314

08/03-500