SHAFT OPTIMIZER

USER GUIDE

Choosing the right shaft for your customer is one of the most important aspects of Club Fitting. Since the shaft will affect distance, ball flight, spin and trajectory, this portion of the fitting should not be overlooked. Fitting the shaft is not as simple as reading clubhead speed. For a complete and accurate fitting, the fitter should consider all of the following factors:

Club Head Speed: How fast the club head and shaft are moving during the swing.

Tempo: How quickly a player transitions from the backswing to downswing.

Shaft Toe Down: A measure of the bowing of the shaft in a downward direction during the down swing.

Shaft Kick Angle: The amount of shaft forward bending during the down swing motion.

Release Factor: How and when the club head and shaft are releasing during the downswing.

Two players with identical club head speeds and tempo can require two totally different bending profiles based on their shaft toe down, shaft kick angle and release factor.

The Mizuno Shaft Optimizer allows the fitter to measure club head speed, tempo, shaft toe down, shaft kick angle and release factor during his/her swing while hitting a golf ball. By measuring club head speed and tempo you can determine the ideal flex and weight of the shaft. These two measurements along with shaft toe down, shaft kick angle and release factor indicate how the shaft is bending during the swing.

Taking all these numbers into account will allow the Shaft Optimizer software to recommend the ideal shaft bending profile which will deliver maximum consistent energy transfer to the ball.

Fitting the right shaft requires experience and some trial and error. However, by using the Shaft Optimizer it should give you an excellent starting point in the shaft fitting process.

Note: If you do not have the Shaft Optimizer software or need the latest upgrade please visit our Mizuno Fitters website at: http://www.mizunofitters.com

USER GUIDE

No.	Item	Function
1.	Power Button.	Press once to turn power on. (Auto Shut-off)
2.	Reset/ Display toggle button	Press and hold to reset unit. Tap to toggle HEADSPEED / TEMPO, TD, KA, RF
3.	LCD Display	Displays ready status of unit and swing data.
4.	Battery Cover	Remove (3) three hex screws and unsnap cover to remove batteries. Snap shut to close and replace hex screws.

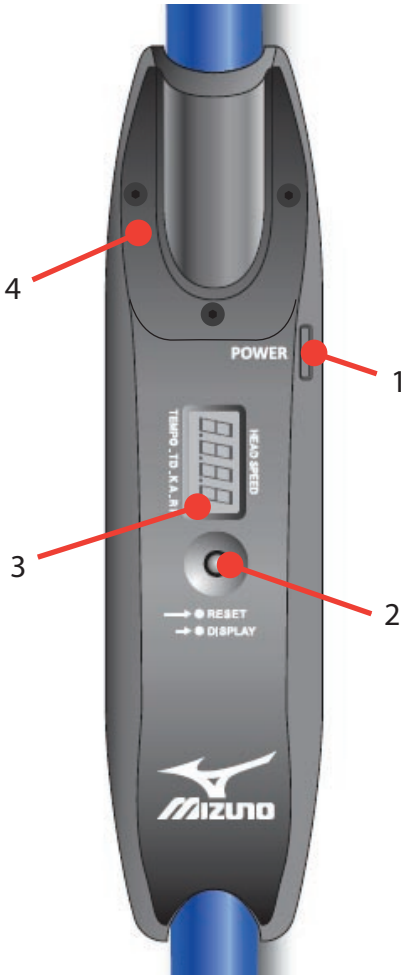

figure A

Fitting for Shaft using the Mizuno Shaft Optimizer :

1. Select the Shaft Optimizer and push the "POWER" button. ("On" will appear in the window). Then press and hold the "RESET" button until the word "Go" is displayed on the digital read-out screen *(figure D)*.

2. Have the customer hit a golf ball off a tee to gather the swing characteristics of his/her specific swing.

3. As you take the shaft optimizer back from the customer, the digital read-out screen will automatically be displaying the CLUBHEAD SPEED reading. *(Figure E)* Record the CLUBHEAD SPEED number into the Shaft Optimizer software and then tap the RESET button one time to display the readings for TEMPO, TOE DOWN, KICK ANGLE and RELEASE FACTOR. (all four readings will appear on the screen simultaneously, separated by a decimal point.) *(figure F)* Record these four readings into the software, just as you did for the CLUBHEAD SPEED reading.

Repeat Steps 2 and 3 (have customer hit another ball), until you have multiple sets of readings entered into the Shaft Optimizer software and then press "START" on the computer screen. The Shaft Optimizer software will calculate and then display the shafts, (steel and graphite) that are best suited to the customer's individual swing characteristics.

4. Choose one of the selected shafts along with appropriate iron model and have the customer hit several balls while visually observing ball flight or measuring with a launch monitor. If necessary, have the customer demo the other shafts selected by the Shaft Optimizer until the PERFECT FIT has been identified!

Setting Headspeed Unit of Measurement "mph" or "m/s".
The Mizuno Shaft Optimizer is a tool used globally by our Mizuno fitting centers. The unit has the ability to output headspeed in meters per second (m/s) as well as miles per hour (mph). The default setting is (mph) but can be easily changed if desired.

1. Make sure your Shaft Optimizer's power is off.
2. Press and hold "RESET" button, (while holding) push "POWER" button gently.
3. Keep holding "RESET" button - the display will flash a symbol.
4. After ten seconds you will see a flashing "USA" and "JPN" on display screen.
5. Release "RESET" button on preferred display option.
   "USA"= mph "JPN" = m/s
6. Allow unit to auto shut off after 1 minute. The setting will be saved when you power on again.

Calibration Mode:
The Shaft Optimizer comes pre-calibrated and it should not be necessary to re-calibrate your unit unless you get erroneous readings on a continual basis. If the unit powers down and still has errors (after resetting), you can try to re-calibrate using the follow procedure. If re-calibration does not fix the problem try replacing the batteries. If nothing mentioned in this user guide corrects the problem, it might be necessary to send your unit back for repairs.

1. Make sure your Shaft Optimizer's power is off.
2. Press and hold "RESET" button, (while holding) push "POWER" button gently.
3. Release buttons.
4. Wait one (1) minute for the unit to auto shut-off. Proceed with normal use.

Replacing Batteries.
The Shaft Optimizer is equipped with an auto shut-off system to preserve battery life. When the batteries need replacing, the Shaft Optimizer's display screen will blink "end". To remove and replace the batteries follow the instructions below:

1. Using supplied Hex wrench (1.5mm) - completely remove the 3 screws on the battery cover. (Failure to remove screws completely might cause damage to cover). *(Figure A)*
2. Unsnap cover from unit by lifting cover from middle screw area up towards golf grip.
3. Release batteries from compartment by lifting ribbon.* *(Figure B)*
4. Replace 4 batteries (type LR44) with positive side (+) matching diagram as shown *(figure C)*.
5. Snap cover into place on both ends so screw holes line up.
6. Replace hex screws.

**Caution: Batteries are under spring compression - please be careful while removing.*

figure B

figure C

example: your measurements might be different

figure D

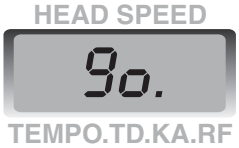

figure E

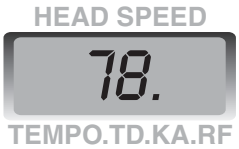

figure F