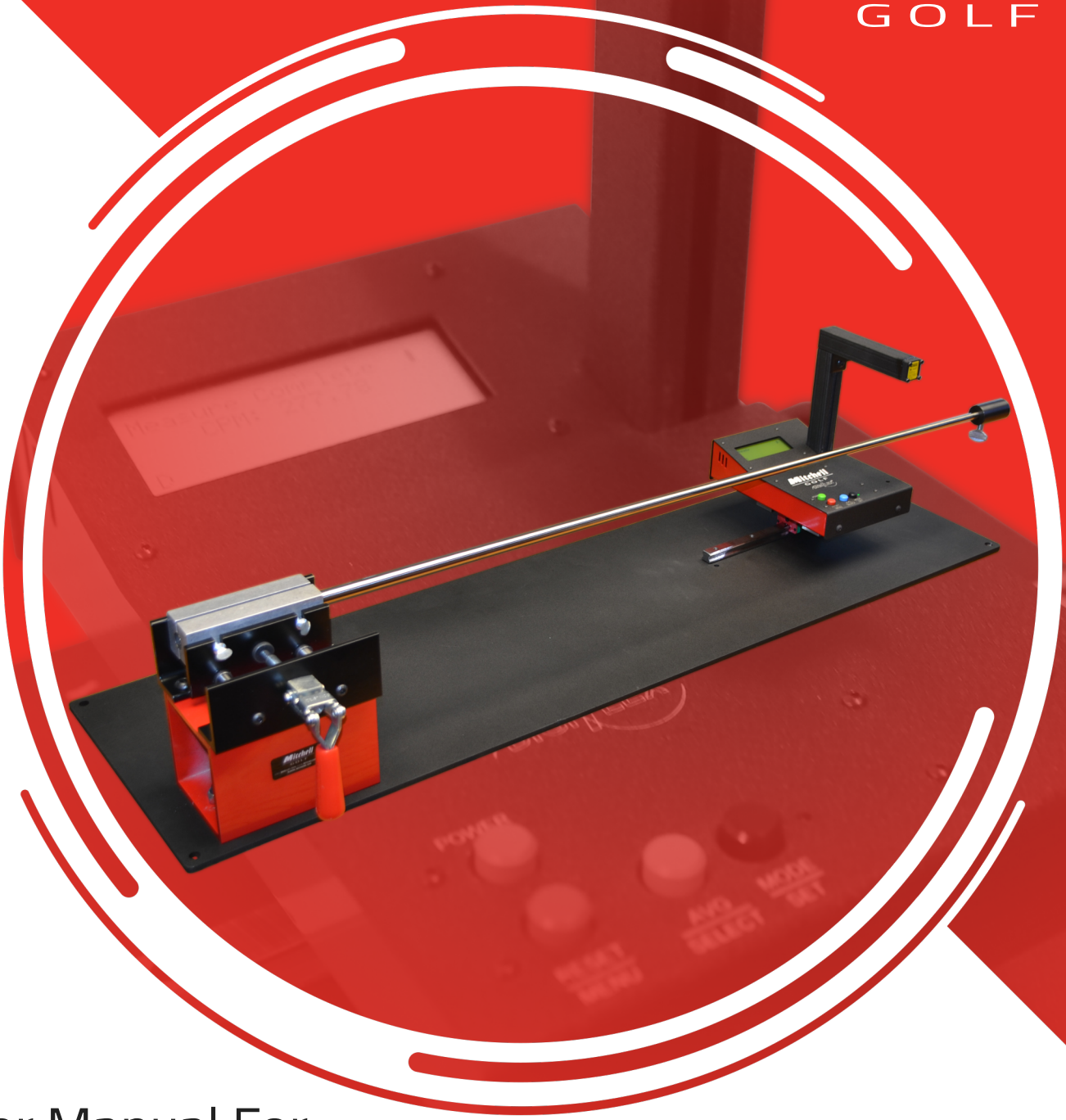
Mitchell GOLF



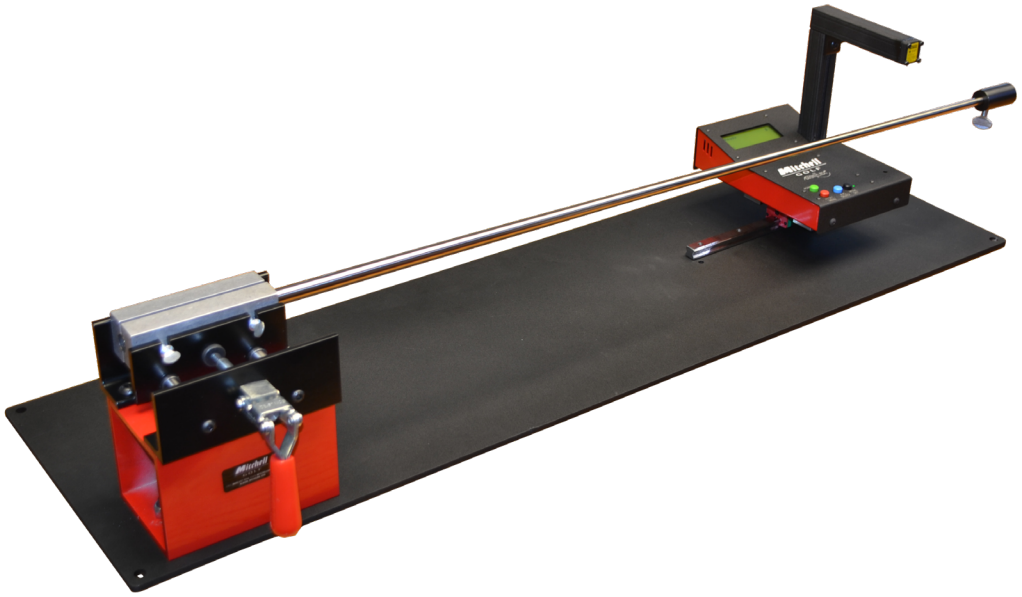
User Manual For:

DigiFlex™ Frequency Meter 2.0

Version 1.0

DIGIFLEX™

FREQUENCY METER



This Digiflex Frequency Meter Was Manufactured For:

Purchased by: _____ Date: _____

Serial Number# _____

Thank You

Thank You for purchasing the golf industry's state-of-the-art DigiFlex™ Frequency Meter 2.0. 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.

Important Notice

The DigiFlex™ Frequency Meter 2.0 is the necessary hardware to check the shaft frequency of assembled clubs and raw shafts for the purpose of comparing.

Our versatile clamping system ensures the correct clamping pressure for accurate and repeatable CPM readings. It clamps clubs with grips, or raw shafts by changing to the shaft clamps. The tapered and contoured Grip Clamp will clamp all shafts including "Big Butt" diameter shafts. The clamping pressure can be adjusted to prevent breaking fragile graphite shafts. The clamps interchange in seconds with an Allen flange screw.

The DigiFlex™ Frequency Meter 2.0 offers accuracy, consistent clamping, and versatility that makes it the best in the industry.

"The Industry Standard For Accuracy."

Guarantee

All products manufactured by Mitchell Golf come with a one year warranty, and are guaranteed against defects and workmanship.

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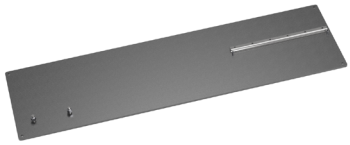
Package Contents

This package includes the following contents:

1x DigiFlex™ Frequency Meter

1x Adjustable Quick Clamping Vise Assembly

1x Portable Base Plate



1x Mini USB Cable

1x USB AC Adapter

Safety

Warning

The DigiFlex™ Frequency Meter 2.0 uses a Class 2 laser module. Caution should be exercised when using the DigiFlex™ Frequency Meter 2.0 to avoid looking directly into the laser or reflections of the laser beam. **Permanent eye damage can result from exposure to laser.** Always use laser approved safety glasses (rated for 650nm wavelength) or the plastic shaft collar included or piece of black tape to prevent reflections when measuring a chrome or other reflective shafts.

The DigiFlex™ Frequency Meter 2.0 uses a lithium-ion battery as its power source. Care should be taken not to store the DigiFlex™ Frequency Meter 2.0 in extreme temperatures. The safe storage temperature range for the DigiFlex™ Frequency Meter 2.0 is between 45° F - 100°F. Operating temperatures should not exceed 95°F.

Maintenance

Lithium-Ion Battery Management System

The DigiFlex™ Frequency Meter 2.0 incorporates a lithium-ion battery management system that continuously monitors the charge rate and discharge level of the battery. This is necessary to maximize the life of the battery and optimize performance. The status of the battery and charging are displayed on the upper right side of the LCD display.

Do not attempt to replace the DigiFlex™ Frequency Meter 2.0 battery yourself—you may damage the battery, which could cause overheating, fire, and injury. The lithium-ion battery in your DigiFlex™ Frequency Meter 2.0 should be serviced by Mitchell Golf LLC, and must be recycled or disposed of separately from household waste. Dispose of batteries according to your local environmental laws and guidelines.

Technical Assistance

Call 1-800-437-1314
Monday-Friday 8:00AM-5:00PM Eastern Time
Email: info@mitchellgolf.com

Frequency Facts

- Frequency is the best measure of flex.
- Deflection method is a measure of a shaft's beam strength.
- Rigid objects have a natural frequency.
- Rate of frequency is not dependent on the amount of force required to create oscillation.
- Frequency is the number of times a shaft oscillates in a unit of time.
- CPM (cycles per minute) is the measurement of the number of times a shaft oscillates in one minute.
- Frequency Gradient/Slope is the progression of cycles per minute between each club in a set.
- Flat Line/Single Frequency is the same cycles per minute for each club in a set.
- Flex is the designation of a shaft's resistance to bending.
- Shaft Beam Length is the distance from the edge of the clamp to the center of mass of the club head or shaft weight.
- Face Plane Oscillation is measuring cycles per minute of a shaft in the same plane that the clubs face is aimed.
- Dampening is the effect on CPM readings caused by grips or a variation in clamping pressure.
- Oval Oscillation is when the shaft oscillates in a pattern that is not straight.
- When comparing shafts of equal length, the higher the CPM reading, the stiffer the flex.
- Each swing weight increase in a club will equal one (1) CPM decrease in frequency.
- Each swing weight decrease in a club will equal one (1) CPM increase in frequency.
- Each 2 gram club head weight change is equal to one (1) CPM change in frequency.

Installation

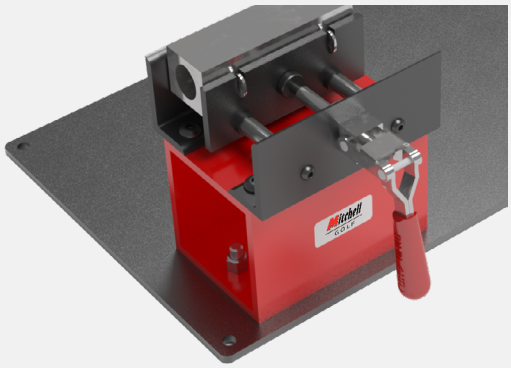


image 1

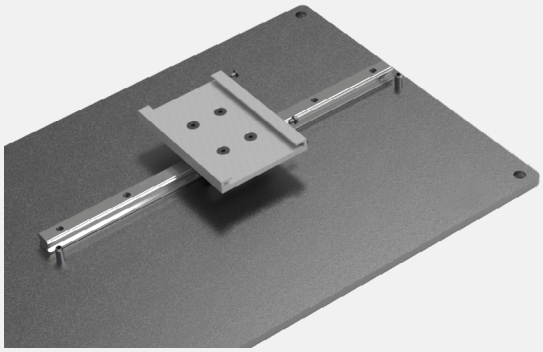


image 2-1

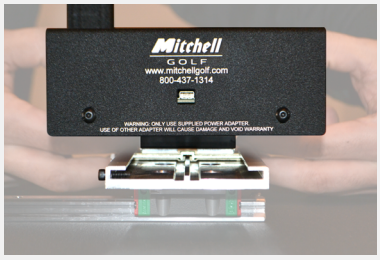


image 2-2

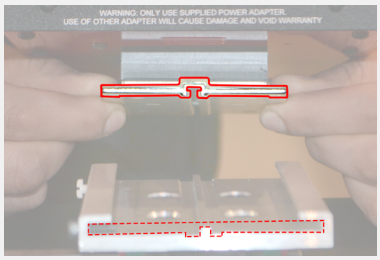


image 2-3

STEP 1

Bolt the Vise Assembly to your Portable Base Plate with the two Mounting Bolts provided, making sure the clamp lever is facing forward. See image 1. When bolted to your workbench, allow enough work area to the right for up to a 48" driver.

STEP 2

Slide the DigiFlex™ Frequency Meter 2.0 into the bracket located to the right of the Vise Assembly. See image's 2-1 through 2-3.

Primary Button Functions

image 3-1

image 3-2

image 3-3

RESET

The RST (Reset) button clears the last results and sets the DigiFlex in ready state (DigiFlex display will show "Ready"). The DigiFlex will not respond to any other button presses until it is in ready state. After every measurement, steady the club shaft so there is no movement. Press the RST button to prepare for next measurement. See image 3-1.

AVG

The DigiFlex will provide an average of over 5 samples based on the initial sample. Change the sample mode by pressing the BLUE button. In sample mode, the DigiFlex will display a total of 5 samples based on the initial sample. The first measurement will be "Initial Measurement". All subsequent measurements will be displayed as "AVG#:xxx(xx) CPM. Once the 5th average has been measured and displayed, the DigiFlex will start the averaging process over again from "Initial Measurement". Averaged results can be displayed in integer or decimal mode. See image 3-2.

NOTE: The AVG mode setting is not retained in memory.

MODE

Change the sample mode by pressing the BLACK button. While in Integer mode, the DigiFlex will round up or down to the nearest whole number. For example, if the resulting measurement is 285.35 CPM, the displayed result will be 285. If the measurement was 285.53 CPM, the result will be displayed as 286. While in Decimal mode, all measured results will be two decimal places. The display mode setting will be retained in memory and set after the next power up. See image 3-3.

Secondary Button Functions

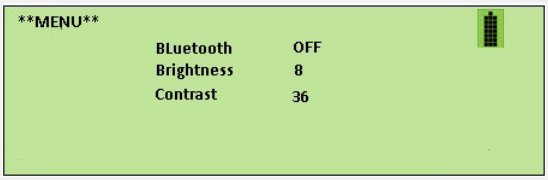


image 4-1

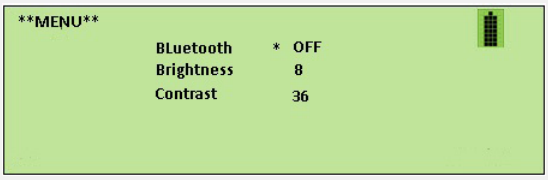


image 4-2

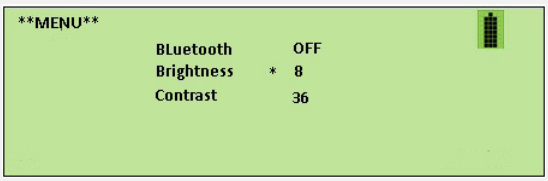


image 4-3

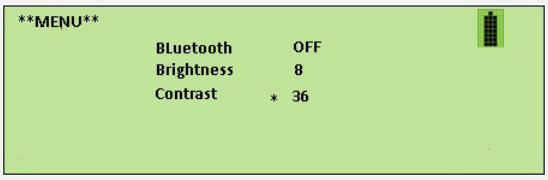


image 4-4

STEP 1

Each of the lower row buttons are also used to access the menu functions. The menu functions are used to adjust the display settings and enable/disable Bluetooth (if equipped). Any settings configured will be stored in memory and applied whenever powered on.

To access the menu, press and hold the RST/Menu button for 2+ seconds. The menu will appear on the display as follows. See image 4-1.

STEP 2

Press the AVG/Select button to choose the item to change. Each press will cycle the item chosen in the menu. The chosen item will have the asterisk (*) next to it. Once the item is selected, press the Mode/Set button to adjust the setting. See image 4-2.

STEP 3

For example, to adjust the contrast of the display, perform the following:

Press and hold the RST/Menu button for 2 seconds.

Press the AVG/Select button repeatedly until the asterisks (*) shows next to “Contrast”.

Press the Mode/Set button until the display is set to your preferred level.

Press the RST/Menu button normally (short press) to store settings and return the DigiFlex to ready state.

See image’s 4-3 through 4-4.

STEP 4

The settings available for each item in the menu are as follows:

Bluetooth (ON/OFF)

Brightness (1-8)

Contrast (25-50)

Charging

image 5

image 6

image 7

STEP 1

The DigiFlex™ Frequency Meter 2.0 incorporates a lithium-ion battery management system that continuously monitors the charge rate and discharge level of the battery.

The status of the battery and charging are displayed on the upper right side of the LCD display as shown. See image 5.

STEP 2

You can use the supplied USB cable to connect your DigiFlex™ Frequency Meter 2.0 to a computer for charging the battery. To charge your DigiFlex™ Frequency Meter 2.0 from a power outlet, you will need the provided AC adapter. See image 6.

STEP 3

The Mini USB plug Connect to the DigiFlex™ Frequency Meter 2.0

The USB plug Connect to a PC USB port or an AC adapter with a USB port.

STEP 4

* The position of the charging port is on the back of the DigiFlex™ Frequency Meter 2.0. See image 7.

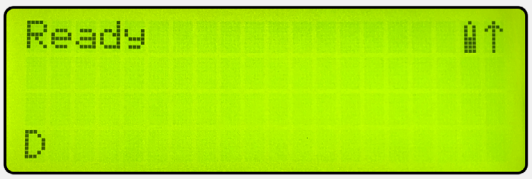


image 8-1

image 8-2

STEP 5

When charging, a up arrow appears next to the battery status indicator on the upper right side of the LCD display. See image 8-1.

STEP 6

Charging should take less than four hours using the supplied AC adapter. Charging using third-party adapters or via USB should take less than four hours, but may take longer depending on the capability of the hardware.

NOTE: You can still use your DigiFlex™ Frequency Meter 2.0 while it is connected to your computer and charging via USB.

STEP 7

When connected and fully charged, a curved arrow appears next to the full battery status indicator as shown. See image 8-2.

Measuring Frequency of Assembled Clubs with Grips

image 9-1

image 9-2

STEP 1

Place the shaft in the clamp securely. Be sure the club has been clamped so the shaft grip end is flush with the clamp. If the club head is attached to the shaft, position the club head up and centered. See image 9-1.

STEP 2

Press the "Power" button to turn on the DigiFlex system. Allow the system to initialize. When the display shows "Ready", the DigiFlex is ready to measure.

STEP 3

Position the DigiFlex sensor so the laser is within ¼" of either the front or back shaft edge or the center of the shaft. See image 9-2.

STEP 4

Press the "RST" button to be sure the system is clear.

image 10-1

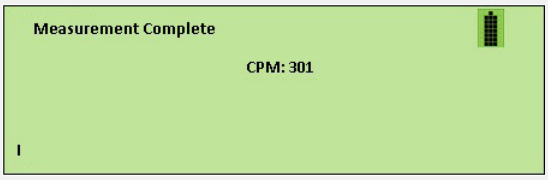


image 10-2

STEP 5

Pull the club shaft end back approximately 1.5" (no more than two inches is necessary). See image 9-2. Upon release of the club shaft, the display will show status of measurement taking place.
See image 10-1.

STEP 6

Upon completion of measurement, the display will show the measured frequency. See image 10-2.

STEP 7

To perform another measurement, make sure the club shaft is stationary (still). Press the "RST" to clear the display.

Comparing Frequency of Raw Shafts

image 11-1

image 11-2

STEP 1

Change the two Grip Clamps to the two Shaft Clamps. Follow the instructions for changing the clamps on page 17.

STEP 2

Place the butt of raw shaft into the Shaft Clamps flush with the end of the clamp or adjust shaft position to other desired clamping lengths.

STEP 3

Install the Shaft Weight onto the tip end of the shaft and tighten the thumb screw to hold the Shaft Weight in place. Be sure tip end of shaft is inserted into the bottom of the Shaft Weight. See image 11-1.

STEP 4

Place The DigiFlex™ Meter with the Sensor directly underneath the shaft, near the weight. You will get the same correct CPM reading when placing the meter at any point along the lower 1/3 of the shaft.
See image 11-2.

image 11-3

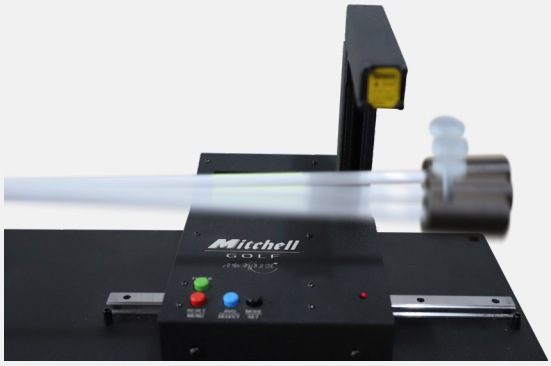


image 11-4

STEP 5

Turn on the DigiFlex™ Meter.

STEP 6

With thumb and forefinger near the weight, pull the shaft HORIZONTALLY toward you approximately 3 inches. See image 11-3. Release the club so it oscillates HORIZONTALLY over the DigiFlex™ Meter. Press and release the Reset Button with the other hand. Do not oscillate the shaft vertically. The result will be an incorrect CPM reading. See image 11-4.

STEP 7

The CPM frequency will be displayed in the Digital Readout.

STEP 8

Repeat STEP 6 to confirm CPM frequency reading.

Changing Clamps

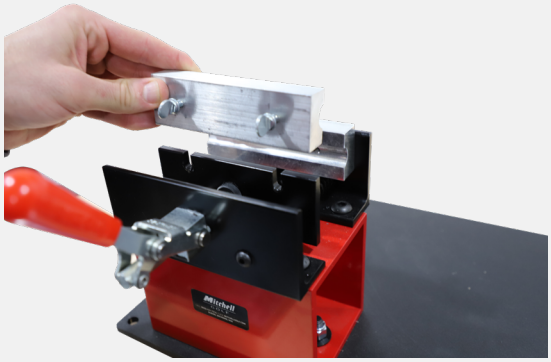


image 12-1

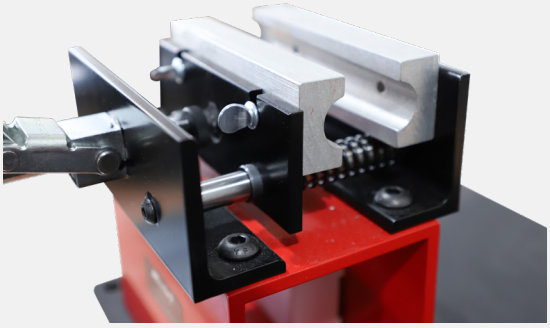


image 12-2

STEP 1

To change the Grip Clamps and Shaft Clamps, loosen the two thumb screws that hold each clamp piece to the Vise Assembly approximately 1/2 turn.
See image 12-1.

STEP 2

Lift each clamp up and replace with other clamps.

STEP 3

Re-tighten the two thumb screws on each clamp.

STEP 4

Be sure to align the Grip Clamps in the same direction, with large opening on the left side of the Vise Assembly, away from the meter. See image12-2.

Please Visit Us At:
www.MitchellGolf.com

For Getting Started or Support Questions Please Email Us At:
info@mitchellgolf.com

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