HOGGAN SCIENTIFIC, LLC.

microFET 2™

USER GUIDE

Congratulations on becoming the proud owner of the new microFET2™ with wireless technology, Hoggan Scientific, LLC highly renowned handheld digital muscle tester. The microFET2™ is the cornerstone of Hoggan's highly functional and innovative medical products group, and is the most widely recognized muscle tester on the market today. The new microFET2™ wireless allows muscle testing to be done FREE of cords in conjunction with microFET clinical patient software. This provides freedom and ease of use performing muscle tests.

Hoggan has been creating innovative solutions for accurate, objective measurement since 1984, with the introduction of the original FET muscle tester. Over the past 20 + years, our product line has expanded to include inclinometers, grip and pinch gauges, and innovative ergonomic measurement instruments.

During that time, Hoggan's products have developed reputation for innovation, excellent quality, ease of use, and long lasting accuracy and reliability. Our highly satisfied customers include hospitals, universities, clinics and research institutions worldwide. The microFET products have been used by organizations as diverse as NASA, the Shands Institute, the US Olympics and professional sports teams.

At Hoggan, we are constantly improving our products to better meet your needs. Besides the addition of the new wireless technology incorporated into the microFET line of products, we've added some important new features to the microFET2™. You can now measure forces up to 300 lbs and select the unit of measure to read out in lbs, Newtons, or kgf.

We understand the value of customer feedback. Our customers provide us with many of our best product improvement ideas, as well as interesting new measurement applications. As you have comments and suggestions, we'd love to hear from you. Please e-mail us at contact@hogganhealth.net.

In the meantime, we hope you enjoy using your microFET2™ with new wireless technology immediately, and for many years to come. For more information on all of our innovative medical, ergonomic and fitness products, please visit us at www.hogganhealth.net.

microFET2™ Wireless Overview

The microFET2™ is an accurate, portable Force Evaluation and Testing (FET) dynamometer, designed specifically for taking objective, reliable, and quantifiable muscle testing measurements. The microFET2™ can be used as a stand alone device, or used with available software. The updated microFET2™ Wireless with radio frequency technology provides convenience for both you and your patients. The wireless microFET2™, when used with Hoggan Scientific microFET clinical software, alleviates the inconvenience of being wired to the computer and provides easier interaction with patients. A wireless instrument allows greater freedom in the exam room or testing area, and eliminates dictating the location of the computer and length of instrument cable so you can move freely during testing.

This unique, handheld device is battery operated, weighs less than 1 pound, and is ergonomically designed to fit comfortably in the palm of your hand. microFET2™ sophisticated digital technology was designed to achieve its high degree of accuracy and reliability.

Information from the gauge is displayed in two LCD windows, Peak Force, and Duration/Sec. During the test, the Peak Force LCD shows the force being applied against the transducer pad, and at the conclusion of the test, the LCD displays the maximum force reached. Duration/Secs shows the elapsed time of the test from the time the testing threshold was crossed until the test was concluded.

The microFET2™ was designed to be a standalone gauge for capturing individual force measurements for any muscle test. However, the gauge can also be attached to Hoggan Scientifics optional muscle testing software to increase your evaluation and documentation capability.

We hope you enjoy your microFET2™ experience.

Hoggan Scientific, LLC

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HOGGAN SCIENTIFIC, LLC.

microFET2™ System

CAUTION: Federal (USA) law restricts the sale of this device by or on the order of a physician.

USER QUALIFICATION
The microFET2™ must be used by a physician or by medical personnel under the supervision of a physician. The user must have received sufficient training in clinical procedures.

DESCRIPTION
The microFET2™ is a wireless-capable dynamometer that measures the peak force applied to the transducer pad and its duration during any muscle test.

INDICATIONS
microFET2™ is a dynamometer device for performing muscle tests to quantitatively measure muscle weakness caused by injury, as well as measure general muscle strength. The device is used to record and convey an individual's ability to resist force for a specific muscle or muscle group being tested.

HOW SUPPLIED
The microFET2™ is a reusable and provided non-sterile to the end-user. The device is packaged in a carrying case (See figure 1) to protect the device during transport. The microFET2™ is supplied with:

- microFET2™ wireless digital dynamometer (5021)
- Flat/Round Transducer pad (0001)
- Curved Transducer pad (00035)
- Digit Transducer pad (00003)
- Muscle Testing Positions wall chart
- Upper Body test recording tablet
- Lower Body test recording tablet
- User Guide
- Product/Warranty card
- Calibration certificate
- Carrying Case
- Rechargeable LI-ion Battery
- Wall Pack Power Supply Charger
- *Optional – Bluetooth / FET Stick (Included with software when software ordered)*

CONTRAINDICATIONS
The microFET2™ is contraindicated under the following:

- On or near open wounds
- Patients having severe osteoporosis
- On or near burned tissue
- On or near the eye
- On or near fractures
- Not to be used for any purpose other than indicated

Figure 1: The microFET2™ device in supplied carrying case

WARNINGS AND PRECAUTIONS:

- **The microFET2™ device should only be used by trained professionals.**
- **The microFET2™ device and accessories are provided non-sterile and are not compatible with autoclave or other sterilization techniques. Do not autoclave.**
- **Use only a factory supplied wall pack power supply, charger. Use of another charger may result in electrical shock or equipment damage.**
- **microFET2™ devices are not intended for use while attached to wall pack power supply, charger. Never attempt to operate the instrument while it is connected to the charger as electrical shock or damage to the instrument may occur.**
- **The microFET2™ device is not protected against ingress of liquids. Keep device dry. Do not immerse the microFET2™ device or accessories in water.**
- **When in use device should be used on top of clothing.**
- **Discontinue use of any product if skin irritation develops.**
- **The microFET2™ is a precision medical device. Device should be treated with care. Do not drop, bang or hit or cause other impact to the device.**
- **Not recommended for use in extreme temperatures.**
- **Applied part is microFET2™ device with a transducer pad attached.**
- **Do not dispose of microFET2™ device in fire. microFET2™ device contains lithium ion battery.**

- **Device is not known to contain any hazardous materials. For proper disposal instructions, consult your local waste management facility. Recycling should be used where available.**
- **Hoggan Scientific microFET2™ and USB dongle should not be used while stacked on, or adjacent to, other electrical or medical electrical equipment. If microFET2™ is stacked or adjacent to other electrical or medical electrical equipment, all electrical equipment should be checked to confirm normal operation.**
- **Rechargeable lithium ion battery is only serviceable part.**
- **Do not service the battery while in use with patient.**
- **Making any modifications or using any accessories not specifically approved by Hoggan Scientific, LLC may void the warranty as well as reduce immunity to electromagnetic interference, or increase electromagnetic emissions, and result in improper operation.**
- **The use of portable and mobile Bluetooth (RF) equipment:**
  - **A. Can possibly affect medical electrical equipment normal operation.**
  - **B. The RESPONSIBLE ORGANIZATION (Hospital, clinic, healthcare professional) should identify, analyze, evaluate and control related risks.**
  - **C. RESPONSIBLE ORGANIZATION - Changes to IT-Network (Updates or upgrades to the microFET2 device, changes to the IT Network Configuration, connections or disconnections of items to the IT Network) could introduce new risks that require additional analysis.**
- **Medical Electrical Equipment needs special precautions regarding EMC. microFET2™ needs to be installed and put into service according to the information provided in this manual.**

DIRECTIONS FOR USE

OPERATING FEATURES

- On/Off Switch – turns device on or off.
- Sleep Mode – The device enters a low power mode after being left on for three minutes. The device can be awoken by turning off the power for at least five minutes or pressing the reset button.
- Reset Button – (see Figure 2) The reset button activates the microFET2™ and reinitializes the unit for testing. It is not necessary to reset after each test, but may be necessary to clear false readings caused by static discharge.

Figure 2. Device Buttons

- Threshold Button – (See Figure 2) Controls the amount of force required before the microFET2™ begins recording test data.
- LCD Windows – Display Test Results and Option Settings.
  - Peak Force – Displays peak force of muscle test
  - Duration – Displays the duration of the muscle test

GENERAL USE

- Read all instructions before use.
- Select the appropriate transducer pad for the test being performed: Flat Pad for flat surfaces, curved pad for rounded surfaces, and digit pad for fingers and toes.
- Attach appropriate transducer test pad to muscle tester by screwing the transducer test pad onto the threaded stud on the muscle tester. Tighten to snug fit but do not over tighten.
- Switch the power button to the "On" position.
- To perform a muscle test, place examiner's hand through the elastic strap of the microFET2™.
- The device is placed between the examiner's hand and the patient's limb to be tested, with the transducer pad contacting the patient.
- The examiner applies a force against the limb, while the patient provides a counter or resistive force.
- After the test, the device displays the peak force measured along with the duration of the applied force for review and recording of test results (see Figure 5).
- To begin another test, perform muscle test. The device will automatically clear previous test results and begin recording data for new test. Pressing the Reset button will also clear previous test results and will display zeroes in both LCD display windows for start of new test.
- Up to 30 previous stored test results can be accessed. See Data Retrieval Mode Instructions below.

DATA RETRIEVAL MODE

- With the device in the test mode (displaying zeroes in both display windows), hold down the threshold button and click the reset button, this puts the device

in data retrieval mode.

- The device will display the peak force (in the peak force window), test number (in the left hand side of the duration window), and duration of the test (in the right hand side of the duration window) See Figure 3).

Figure 3. Data Retrieval Mode Test Result Display Example

- Press the threshold button to cycle through the stored test results (up to 30).
- For tests shorter than 10 seconds, a decimal point will appear for the duration.
- For tests longer than 10 seconds, no decimal point will appear for the duration.
- To delete saved tests, hold down threshold button and click reset button twice.
- Note: If wireless or RF mode is powered on (wireless mode turned on for use of device with software), device will not save and store tests.
-

microFET2™ WIRELESS OPERATION

The microFET2™ may wirelessly transfer data to accompanying software if desired by the examiner.

- To turn the wireless mode on, hold down the threshold button for ten (10) seconds.
- The device will enter force unit of measure setting mode after five (5) seconds, continue to hold down the threshold button until the peak force display shows "rF", this is the wireless power setting menu (see Figure 4).

Figure 4. Wireless Mode Setting

- The duration screen will display the current wireless power mode as "On" or "Off".
- Toggle the wireless power setting by pressing the threshold button.
- Return to test mode by pressing the reset button.

THRESHOLD SETTINGS

- The device threshold determines the minimum force required before the microFET2™ begins recording test data as shown in the table below.

Threshold Setting	High	Low
Force Required to Start Test	3 lbf 12.1 N	0.8 lbf 3.6 N
Measurement	Up to 300 lbf in 0.1 lbf increments (1320 N in 0.44 N increments)	
When to Use	Normal Use – Reduces False Starts	Weak Muscles, Finger and Toe Tests

- The current threshold setting is displayed as either an "L" or "H" on the left side of the duration window. Figure 5 shows the device in Low Threshold Setting.

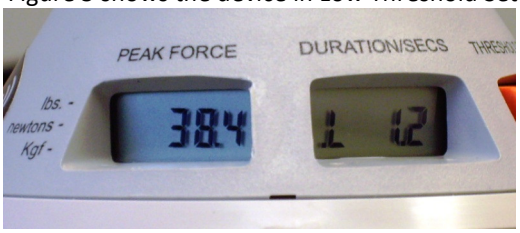

Figure 5. LCD Display Windows /Threshold Setting and Sample Test Results

- The threshold can be toggled between high and low by pressing the threshold button (see Figure 2) when the device is in test mode.

FORCE MEASUREMENT SETTINGS

- The force unit of measure may be changed between Pounds, Newtons, and Kilogram force.
- With the device in test mode, hold down the threshold button for five seconds, this puts the device in force unit of measure mode.
- The Peak Force display will then display a hash mark next to the current measurement unit in the peak force window (See Figure 6) .

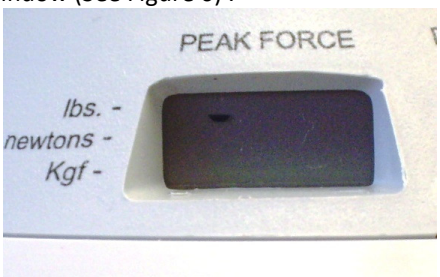

Figure 6. Force Measurement Mode

- Press the threshold button to toggle through the available units of measure.
- Once the desired unit is selected, press the reset button to return to test mode.

BATTERY CHECK

- With the device powered on in test mode, hold down the threshold button and click the reset button.
- Continue to hold the threshold button for five seconds. The device will display “P” in the peak force window and a number from 1 to 100 in the duration window. The number in the duration window indicates the battery charge in percentage (See Figure 7).

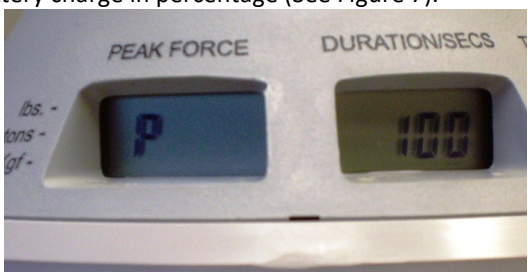

Figure 7. Power Check Display

- The unit will return to data retrieval mode after five seconds. To regain access to battery check, hold the threshold button for five seconds.
- To return to test mode, press the reset button.

“MAKE” OR “BREAK” MUSCLE TESTING

The microFET2™ is designed to be used with either the "make" or the "break" form of manual muscle testing.

To perform “make” testing the clinician positions the patient to isolate and contract the muscle of interest with the device in the proper position (see Figure 8 for examples). The clinician gets into "power position", a stable position that will provide the clinician the maximum ability to resist the force applied by the patient. The clinician instructs the patient to apply force against the device, while the clinician resists. The object of the test is for the patient to exert or "make" the maximum force he is capable of, using only the muscle being tested. "Make" tests typically run for seconds (slow count of 4). Many people find it helpful to start the test by announcing "go" and end the test by stating "relax".

"Break" testing is also performed by carefully positioning the patient and the device. The clinician stabilizes the patient in the isolated position, with one hand, while placing the microFET2™ unit in position to exert force against the limb associated with the muscle. The test begins with the clinician gradually applying force and the patient trying to resist. The object of the test is for the clinician to overcome, or "break" the patient's resistance.

Multiple published studies have proven manual muscle testing to provide consistent, reliable results, both across multiple tests by single tester, and across multiple testers. The keys to achieving valid results are proper patient and device positioning, and consistency of the testing methodology used.

Figure 8. Examples of Muscle Tests

For information on positions and manual muscle testing for main muscle groups, refer to the Manual Muscle Testing Positions Wall Chart included with your microFET2™. For additional clarification or how to test for additional muscle test positions, refer to manuals such as Daniels and Worthingham.

LOW BATTERY INDICATOR

Blinking readouts in LCD displays or unlit segments of the LCD display are indications that the microFET2™ battery power may be low. If LCD displays still blink or unlit segments remain after pressing Reset, the battery should be charged.

To avoid testing interruptions due to low battery power, we recommend that you check remaining battery power regularly, and re-charge battery when reaches approximately 15% power level. To check battery power, follow the battery check instructions.

CHARGING THE BATTERY

- To charge the battery, unscrew the transducer test pad to remove from the main unit.
- Insert the barrel connector from the wall pack transformer into the power connector that is located under the attachment. (see power connector on microFET2™ , Figure 9).
- If the unit is turned on the right display will show the battery power while the battery is charging.
- When the battery power reaches 100% then the battery is fully charged.
- To check battery level charge, turn power button to On position.
- If device is stored longer than 30 days, check battery power level and recharge battery before using if necessary.

Caution: *Only use power supply provided by manufacturer: Phihong Model PSAC05R-050-L6.*

Caution: *The power supply is the disconnect device and shall remain readily accessible for easy disconnection.*

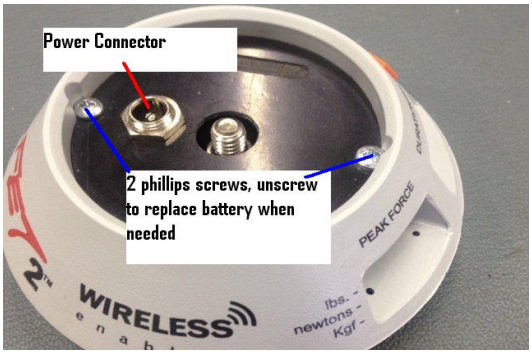

Figure 9. Device Charging and Battery Access

REPLACING THE BATTERY

When replacing rechargeable battery, use only rechargeable battery supplied by Hoggan Scientific: Model ICR14250 (1) 3.7V 1/2 AA LI-ion rechargeable battery, 280 mAH. Other batteries may cause damage to device and void warranty. These batteries can be purchased from Hoggan Scientific LLC. To change the battery:

- When replacing battery, do not touch the internal circuitry, battery, and patient simultaneously.
- Remove the attachment from the main unit. Carefully remove the 2 Philips head screws from the battery cover (see Figure 9).
- Pull the battery cover up and rotate to the side to allow access to the battery.
- When installing new battery, make sure the positive (+) post of battery aligns with the (+) mark on the microFET2™ pc board (see Figure 10).
- Check power level of rechargeable battery to see if needs charging before use.
- If after installing replacement battery, the segments do not light up in LCD displays, please contact Hoggan Scientific LLC Customer Service Department at ph: 800-678-7888 / 801-572-6500.

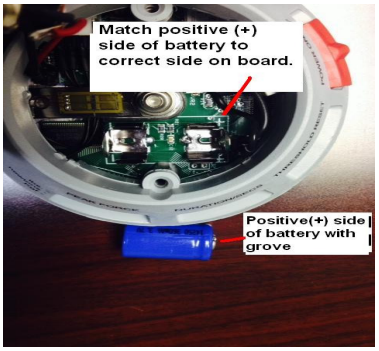

Figure 10. Battery Replacement

STORAGE AND TRANSPORTING

The microFET2™ is provided with a hard sided protective carrying case. It is recommended to keep the device in this case when in transportation or when not in use. Store the device in a cool dry location.

SERVICE, MAINTENANCE, AND CLEANING

Your microFET2™ is built to provide long lasting, reliable service. As with any precision instrument, it should be used with care. It should not be dropped, banged against hard surfaces, or used as scale.

The microFET2™ 's exterior surface can be cleaned with soft cloth dampened with clean water We recommend that you periodically inspect your unit for wear, and proper functioning.

Caution: Do not immerse microFET2™ or accessories in water or other fluids or liquids. Device is not protected against moisture, water or liquids.

DEVICE DISPOSAL:

Follow electronic device disposal guidelines when disposing of used device. There are no special risks related to the disposal of these devices.

USE LIFE:

The microFET2™ is designed to provide long lasting reliable service. The expected use life of the device 5-10 years. This is determined by the use frequency and proper maintenance and care by the user. Improper use, dropping, or mistreatment of the device will likely shorten its functioning Use Life.

CALIBRATION:

The microFET2™ comes with calibration certificate, ensuring that the unit was properly calibrated at the time of shipment. To ensure continued accuracy and reliability, your microFET2™ unit should be recalibrated annually, by properly authorized Hoggan Scientific, LLC service technicians.

If the microFET2™ device is to be used with the optional software, software setup and USB driver installation is required. Please refer to software and USB driver set up instructions that comes with the software.

WARRANTY

The microFET2™ is warranted for a period of one (1) year from the time of purchase. If the microFET2™ fails to operate because of defect in materials or workmanship at any time within one (1) year of the purchase date, it will be repaired free of charge by Hoggan Scientific LLC. (return shipping not included). Extended warranties are available at an additional nominal fee.

If you wish to purchase and extended warranty after the purchase of your microFET2™, there is a 30 day grace period to purchase an extended warranty package. Contact Hoggan Scientific, LLC for more information.

WARRANTY REGISTRATION

To ensure your warranty is in force, please complete and mail, or fax your warranty card to Hoggan Scientific LLC at 800-915-3439. Or visit www.hogganhealth.net to register your warranty information online. Please save proof of your original purchase date, such as your sales slip, invoice, credit card voucher, or cancelled check to establish the warranty period.

WARRANTY REPAIRS

Before deciding that your microFET2™ is inoperable or defective, please review and follow the information in this instruction booklet.

In the unlikely event your microFET2™ becomes inoperable, please contact Hoggan Scientific, LLC to arrange to have the equipment repaired. Hoggan reserves the right to repair or replace the unit with new or refurbished parts or equipment**.**

Hoggan's Customer Service Department can be contacted at 800-678-7888, or by email at contact@hogganhealth.net. When Hoggan Customer Service Representative authorizes return of the product, you will be given Return Merchandise Authorization (RMA) number. Please include the RMA number with your unit. For confirmed warranty repairs, the customer is responsible for the applicable shipping costs and shipping to Hoggan Scientific.

WARRANTY EXCLUSIONS AND LIMITATIONS

The microFET2™ warranty does not cover damage by negligence, misuse, or accident. Damage or unit failure caused by modifications or repairs other than those approved by Hoggan or its authorized repair agent, or damage to equipment resulting from improper installation or operation is not covered. Any warning or instructional labels or decals must remain on the unit for the warranty to be valid.

This warranty applies to the original purchaser. Some states do not allow the exclusion or limitation of incidental or consequential damages, in which case the exclusions and limitations may not apply. This warranty gives specific legal rights, and may also have other rights, which vary from state to state. To determine the legal rights in your state, consult your local or state consumer affairs office or State Attorney General.

CUSTOMER SERVICE REPAIRS

Customer satisfaction is important to Hoggan. We are happy to assist with questions, problems or service issues on any Hoggan products you may own. Our business has grown on the basis of excellent product quality and customer satisfaction. Our fulltime customer service representatives are available from 7:00 am to 4:30 pm MST at 800-678-7888 to meet your needs. You can also contact Hoggan Scientific online regarding your customer service issue or calibration needs by e-mailing us at contact@hogganhealth.net.

ORDERING REPLACEMENT PARTS

Hoggan Products are manufactured to exacting specifications. When replacing worn or damaged parts, use only original parts supplied by Hoggan Scientific. The use of substitute or unauthorized parts will void your warranty and may increase the possibility of injury to the user, or cause additional damage to the unit.

When ordering Replacement Parts, please take the unit out of service, and complete the following:

- Identify the brand, model, and serial number, and note the unit's function.
- Identify and document the problem and the worn or missing parts.
- Contact Hoggan Scientific LLC. Replacement parts (attachments) will be shipped directly from Hoggan.

All repair services will be performed at Hoggan Scientific LLC Manufacturing plant.

Except for replacing batteries, do not attempt to repair the unit on your own. This will void all warranties.

microFET2™ batteries, replacement parts and Preferred Service Contracts can be ordered either by calling Hoggan Scientific LLC or order online at www.hogganhealth.net.

microFET2™ SPECIFICATIONS

- Weight: 1 lb.
- Operation Use Time:
  - Non-wireless mode - 90 hours continuous
  - Wireless mode - 6 hours continuous
- Transportation, Storage, and Operating Conditions:
  - Temperature: 11 – 33 degrees Celsius (52 – 92 degrees Fahrenheit)
  - Humidity: 30 - 80% humidity non-condensing
  - Atmospheric Pressure: 800 hPA - 1060 hPA. (11.60 psi – 15.37 psi)
- Maximum Force Capacity: 300 lbs. (136 kgf / 1320 Newtons)
- Internal Power Source - Battery: Model ICR14250 user serviceable, 3.7 volt 1/2 AA lithium ion rechargeable battery 280 mAH.
- Input Power: 5V 1.0A
- Recharge Time: Three (3) continuous hours of charging
- Power Supply: Phihong Model PSAC05R-050-L6. Input - 100-240V. Output – 1A. 5 volt DC regulated
- No Protection Against Harmful Ingress of Water: IPX0 – ordinary equipment
- Test Range:
  - Low Threshold 0.8 lbs to 300 lbs in 0.1 lb increments Metric Newtons: 3.6N 1320N in 0.4N increments KGF (kilograms force):
  - 0.4kgf to 135kgf in .1kgf increments

- High Threshold 3.0 lbs to 300 lbs in 0.1 lb increments Metric Newtons: 12.1N to 1320N in 0.4N increments KGF: 0.4kgf to 135kgf in 0.1 increments
- Accuracy: Within 1%
- Data Storage Stores 30 most recent tests.
- Wireless Frequency Operating Distance: 25 feet, 7.6 meters from receiver, indoor environment
- Device is Class II ME equipment while charging, and internally powered when in use.
- FCC ID: T9J-RN42
- Radio Frequency: 2.4 GHz

DEVICE CLASSIFICATIONS
Classifications: Class II
Type B Applied Part
Mode of Operation: Continuous
IPX0 (Do Not Wet the Device)

Device complies with:
IEC 60601-1-2:2014 (EMC)
IEC 61000-4-2 (2008)
IEC 61000-4-3 (2006), A1:(2007), +A2:(2010)
IEC 61000-4-8 (2009)
CISPR 11 Emissions Class B (2009), +A1:2010
Radiated Emissions Conducted Emissions
FCC Part 15B

TECHNICAL ASSISTANCE:
For further assistance, contact Hoggan Scientific at:
www.hogganhealth.net
Phone: 800-678-7888 / 801-572-6500
Email: contact@hogganhealth.net

GRAPHIC SYMBOLS AND DEFINITIONS

						**Rx Only**
Device will not work when connected to AC outlet	Device is provided non-sterile	Attention, See Instructions for Use	Catalogue number	Serial Number	Keep Dry	For prescription use only
	**IPX0**					
Manufacturer	Do not wet the device	Class II Electrical Equipment	Type B applied part – External Body only contact	FCC Compliant Device	Radio Frequency	

microFET2™ is a registered trademark of ***Hoggan Scientific, LLC***.

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Hoggan microFET Clinical Software Manual

Hoggan Scientific, LLC

Software Manual 2016 Version 1.1

Hoggan Scientific, LLC Clinical Software
For Clinical Software Version V11.0.2

Table of Contents

microFET Clinical Software Computer System Requirements

The following computer system requirements must be met for Hoggan Scientific microFET clinical software to function properly.

Minimum Computer System Requirements

- Pentium 450 MHz or higher
- Windows XP, Vista, 7, 8
- 1024 x 768 display
- 256 Screen Colors
- 64 MB RAM
- CD/DVD drive for software installation
- USB Port
- 1 GB free hard disk space
- Mouse
- 16 bit sound card with speakers
- Color Printer
- Microsoft Word 2003 or newer

* Windows NT is not recommended as an operating system for Clinical software by Hoggan Scientific, and therefore is not supported by Hoggan Scientific for use with our software products.

** Microsoft Word is recommended to optimize Narrative reports functionality.

Customer Support
If you have further questions about computer system requirements for running microFET Clinical software, installing the software, or require technical assistance, please contact Hoggan Scientific at 800-678-7888 / 801-572-6500 or by email at contact@hogganhealth.net.

Important Notice:
For customer service calls, it is necessary to have a telephone located within reach of the computer running the Hoggan Scientific, LLC microFET clinical software. This is vital during installation and technical support calls because you will have to access the computer while working with our customer service staff. Without a telephone located near the computer, Hoggan Scientific, LLC representatives and support staff will be unable to provide you with proper, timely service.

Product Return Policy
Purchased microFET clinical software is non-returnable.

Software Installation

The following procedure describes the installation process whether you are installing new software or upgrading from a previous software version or windows operating system.

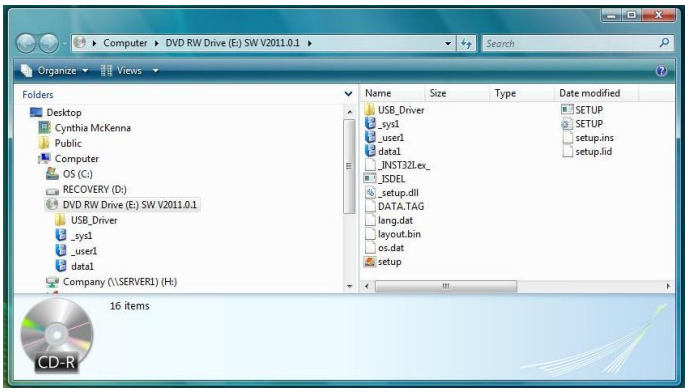
Auto Installation:

1. Start your computer and exit any applications that might be running.

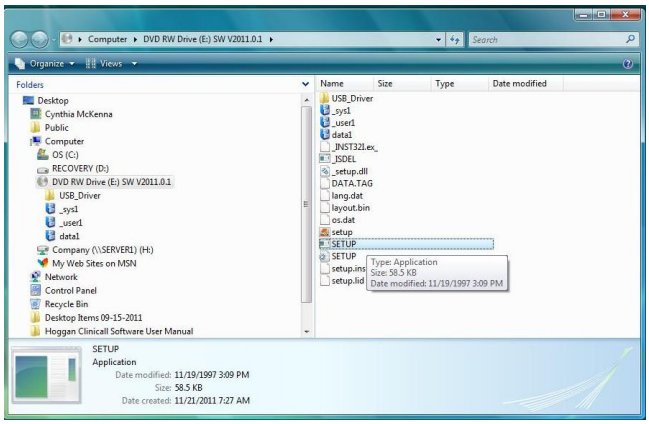
2. Insert the microFET Clinical Software CD into the CD-ROM drive.

3. AutoPlay Window will appear on screen. Select Open Folder To View Files.

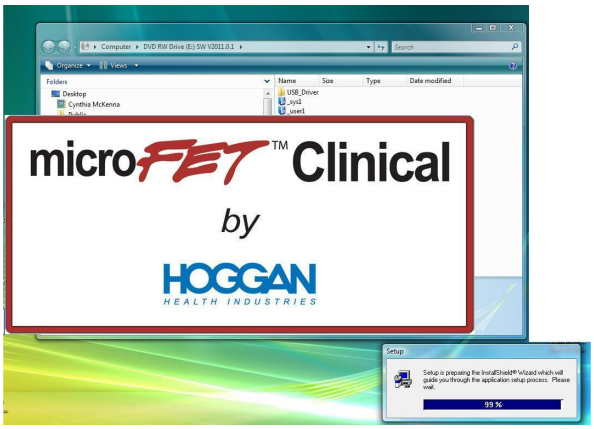
4. The next window that will appear is the list of files on the Clinical Software CD.



5. Click on the Setup Application Icon to start the software installation.

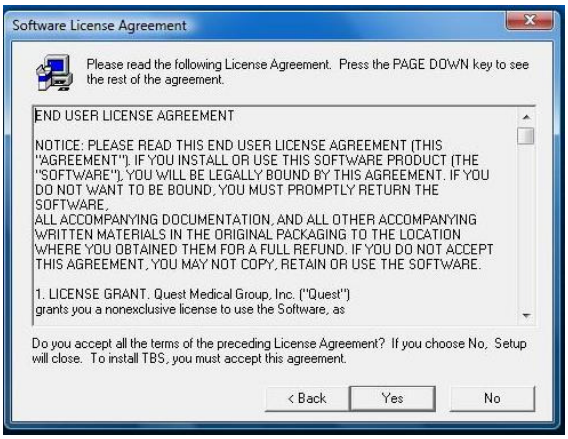


6. The microFET Clinical Software window will appear and Setup Install Wizard also appears in bottom right hand corner of computer screen.



7. At the Welcome to the InstallShield Wizard for Hoggan Scientific Clinical Software dialog box, click Next.

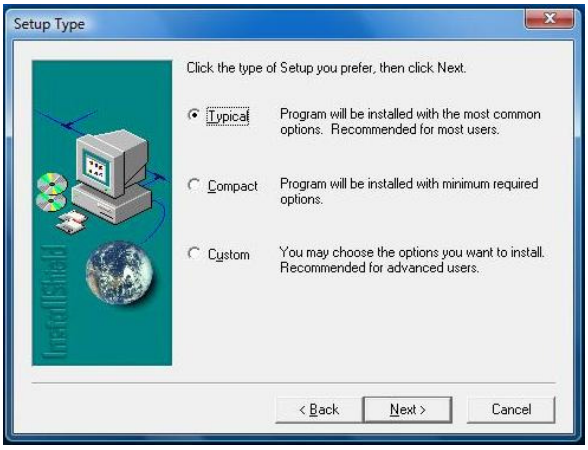
9. Carefully read through the Blankenship System End User License Agreement. When you have finished reading it indicate whether or not you accept the terms of the license agreement, and click Next if you accept the terms. You cannot continue with the installation until you select the option indicating you accept the terms of the license agreement.



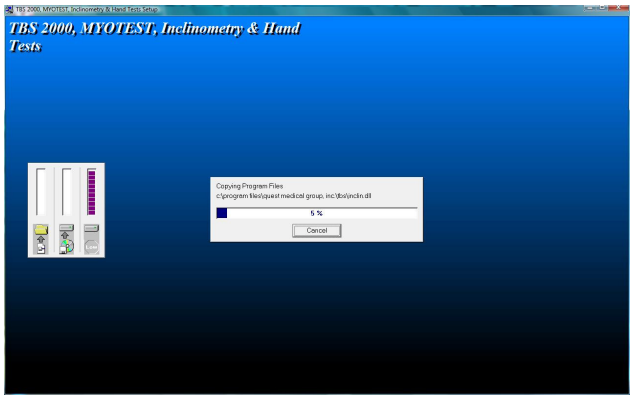
10. Choose the destination location to install the clinical software. Setup will install the clinical software in the default location listed in the destination folder dialog box. To install in the default folder selected, click Next. To install in a different folder, click Browse and select another

folder. If you choose not to install the clinical software, click on Cancel to exit Setup.

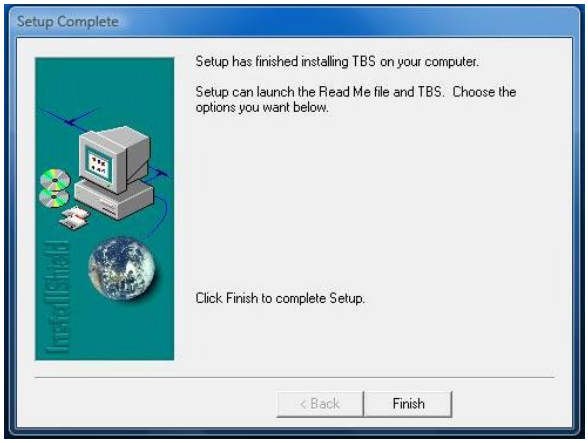
11. Type Software Install: Typical is the default or preferred software setup installation. Select Typical Install. Click Next. If you have questions regarding the type of software installation desired, please contact Hoggan Scientific LLC Customer Support at 800-678-7888 / 801-572-6500.



7. Setup will install TBS software based on type software installation selected.



8. Click Finish to complete Setup and exit Install Wizard.



The microFET Clinical Software is now installed.

Manual Installation

If the computer does not automatically initialize the Hoggan Clinical Software that brings up the welcome screen, the following instructions are to manually begin the software installation:

1. Insert the software disk into the CD-ROM or DVD-ROM drive.
2. Click on Start button in bottom left corner of computer screen.
3. In Start menu select Run.
4. Type the following, which includes location of the CD-ROM drive for the computer. Following is an example:
   D:\setup.exe
   As option, click on Start button, then click Browse in Start menu. Locate CD-ROM or DVD-ROM drive for the computer, then locate setup.exe on the installation disk in the drive.
5. Click Open. Then click OK at bottom of the window.
6. Follow software auto install instructions.

USB DRIVER INSTALLATION: INSTALLING DRIVER FOR WIRELESS AND WIRED MICROFET2 VERSIONS.

Note: Whether microFET device is wireless version or previous wired version with USB

converter box and cable, the driver installation instructions are the same.

Note: The USB wireless receiver included in your software you can plug directly into a USB port. For corded models where a USB connector box and cable were included with your software, you may encounter interference attempting to plug the USB connector box into a USB port, due to other peripherals (ie., mouse, printer cable) that may be connected to other USB ports. You can use the short USB extender cable that is included in your software kit to be able to use the USB connector box. Insert the USB extender cable into a USB port on computer, and then connect USB connector box to the USB extender cable.

1. Insert USB wireless receiver or USB connector box into a USB port.

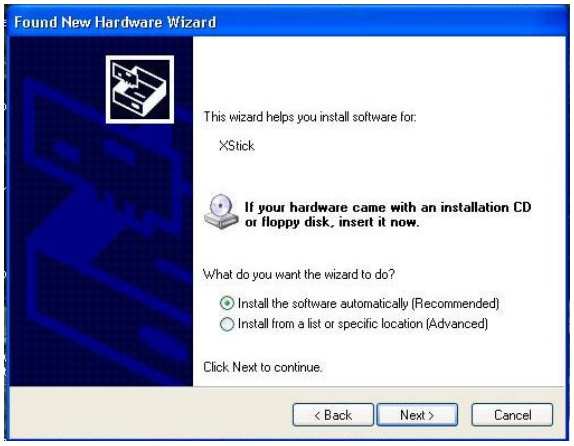
2. The message Found New Hardware dialog bubble will appear on the desktop computer screen in bottom
right hand corner.

3. Click on the Found New Hardware dialog bubble.

4. The Found New Hardware Install Wizard dialog box will appear.

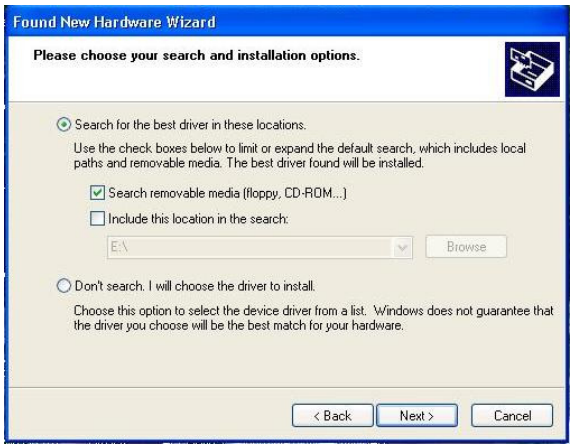
5. In the Found New Hardware dialog box, for the question – Can Windows connect to Windows Update to search for software? - **Select No, not this time.** Then click the Next button to continue.

6. The next Wizard dialog box with default setting for installing USB driver appears.



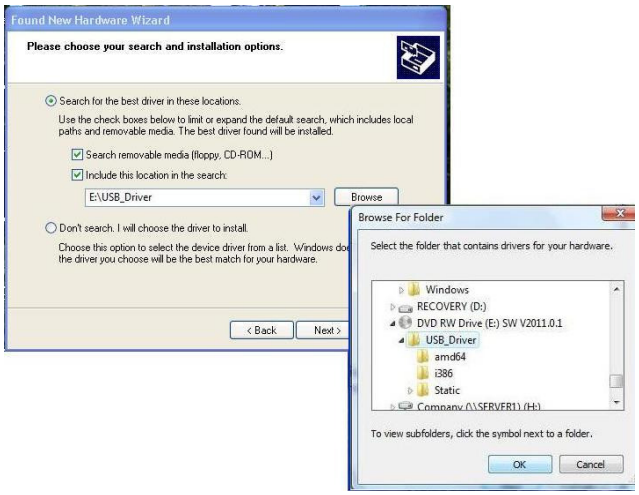
7. A question will appear – What do you want the wizard to do? - **Select (Advanced) Install from a list or specific location.** Then click the Next button to continue.

8. Found New Hardware Wizard – Please choose your search and installation options dialog box with default settings appears.



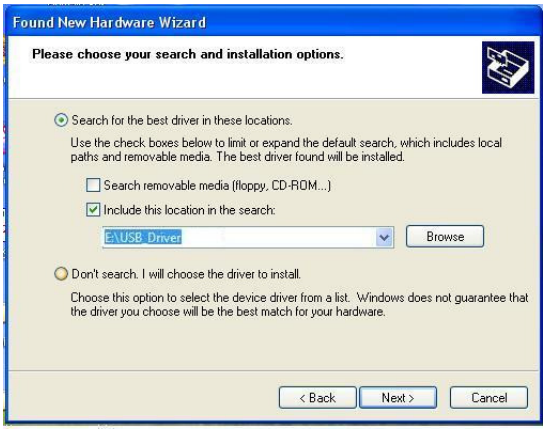
9. In this dialog box, If Search removable media floppy CD-ROM has a check in the box next to it, unselect this option.
Select – Search for the best drive in these locations: Then click on the box next to Include this location in the search.

10. Next click on the Browse button. A Browse Folder Dialog box will appear. Locate the drive on your computer in which the software CD is in the CD tray.



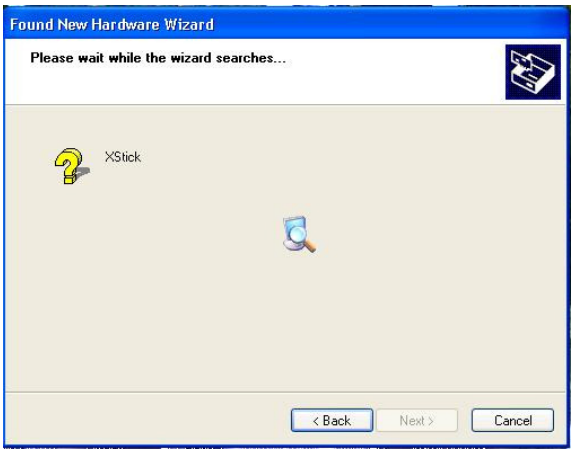
11. When you have located the drive where the software CD is located, click on the drive with your cursor to highlight. Then click the OK button and the bottom of the Folder Dialog box.

12. The CD Drive in which the CD that contains the USB driver is the destination location to select to search for the USB driver software is inserted in the location box.



13. Click on the Next button at the bottom of the Found New Hardware Wizard dialog box. The Hardware Wizard will locate and begin installation of the USB driver.

14. The Found New Hardware Wizard searches and begins installation of USB driver.



15. USB driver installation is in process.

16. The Found New Hardware Wizard has finished installing the USB Driver. **Click Finish to close the wizard.**

17. The USB wireless receiver (or USB connector box for corded models) is now ready for use with microFET Clinical Software.

If you encounter problems installing the USB driver, please contact Hoggan Scientific, LLC customer support by phone at 800-678-7888 / 801-572-6500, or e-mail at contact@hogganhealth.net, and one of our customer service technicians will be glad to assist you.

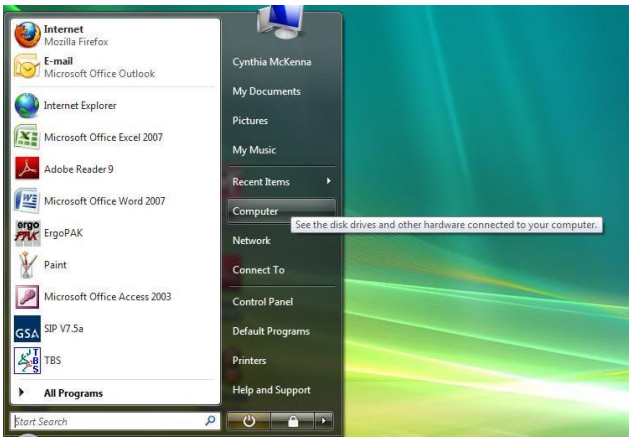
Clinical Software COM Port Set-up Instructions

Before starting testing with microFET Clinical software, the com port settings need to be checked to be sure that com port settings for both the software and computer are the same, so the software can communicate with the microFET dynamometer. Depending on which Microsoft Windows Operating System is installed on your computer, some of the language and computer screens may vary for the following instructions.

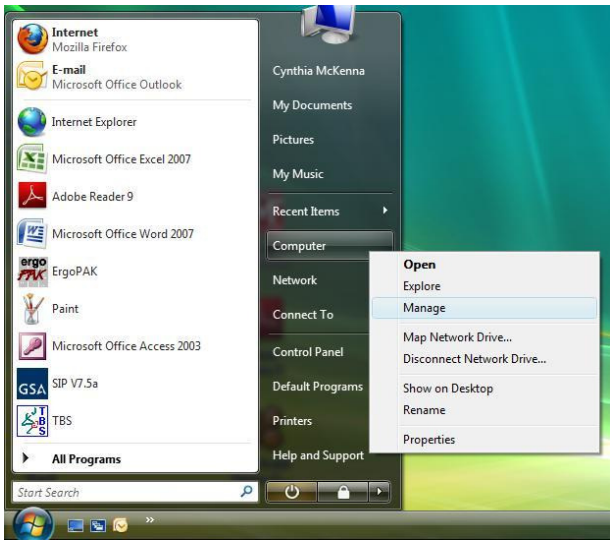
With software program closed and gauge connected to the computer, follow these steps:

1. Click “Start” Button located in the bottom left hand corner of computer screen.

2. The Start Up Menu will appear. **Right** click on “Computer” or “My Computer”

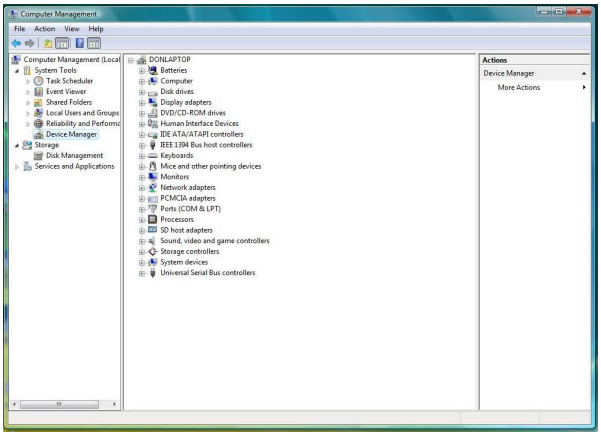


3. A drop down menu will appear. Select and right click on Manage.

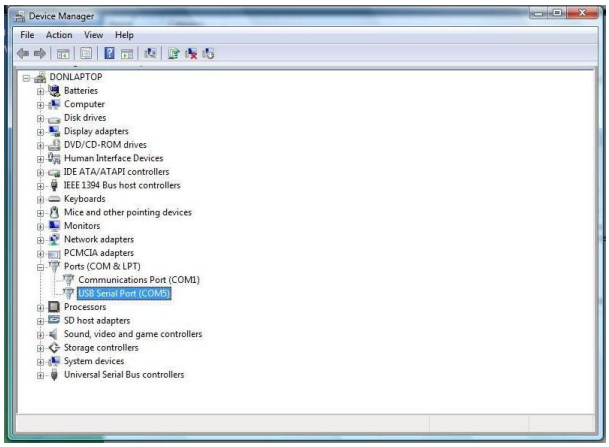


a. This will open a computer management screen.

4. The Computer Management Screen will appear. On the left side of the Computer Management Screen, select and click on Device Manager, or click on the plus (+) sign in front of Device Manager. A list of devices will appear on the right side of the Computer Management Screen.

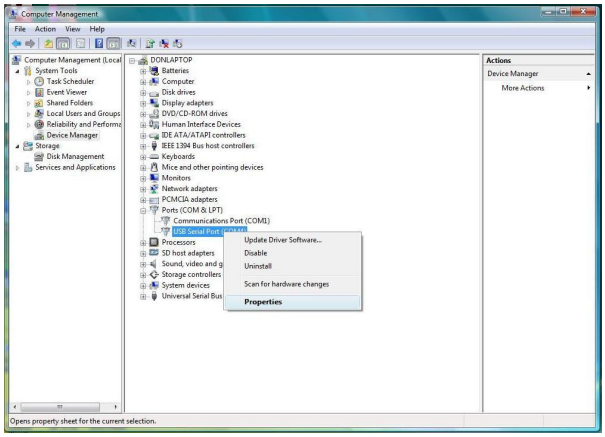


5. In the list of devices, locate Ports (COM and LPT). Either select/click on Ports (COM and LPT), or click on the plus (+) sign in front of Ports (COM and LPT). This will open up to show the COM and LPT ports currently being used.

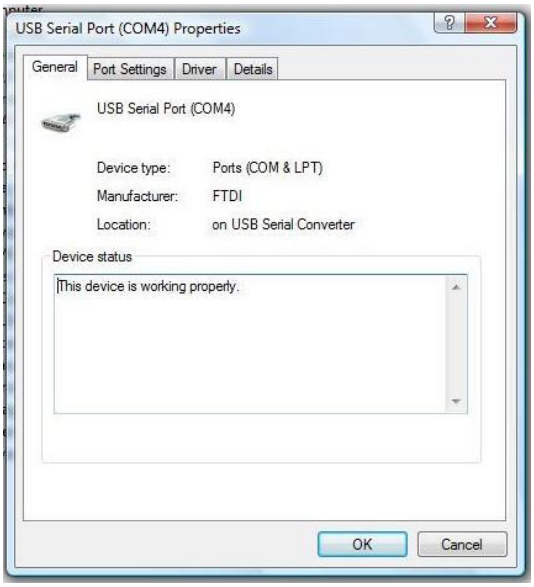


In Ports (COM and LPT), USB Serial Port COM with a port number shown after COM (1, 2, 3,…) should be listed. If com port 1-10 is not the comport selected for the USB driver by the computer when driver was installed, the com port needs to be changed to be able to have the device communicate with the software.

6. USB Serial Port (COM….) should be listed. Select and either Right click or double click on the USB Serial Port COM…
A drop down menu will appear. In the drop menu select Properties.

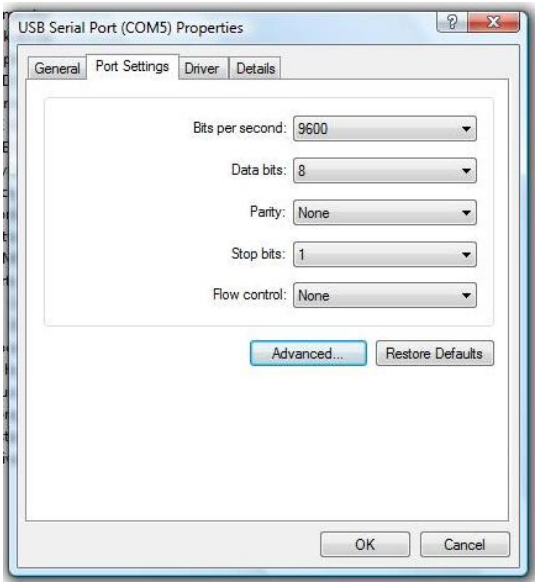


7. The USB COM Port Property Windows appears.

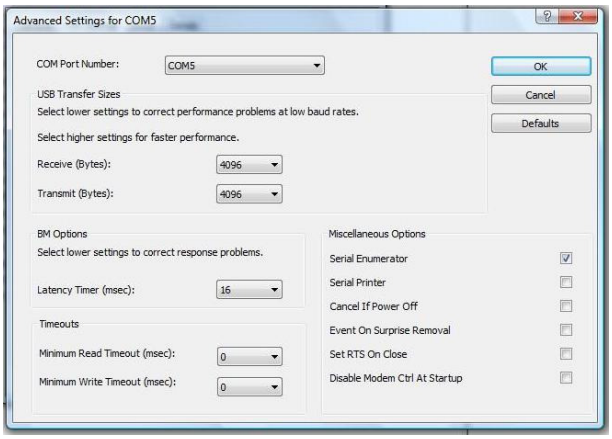


a. Select Port Settings Tab.

8. In the Port Settings Tab, select Advanced.

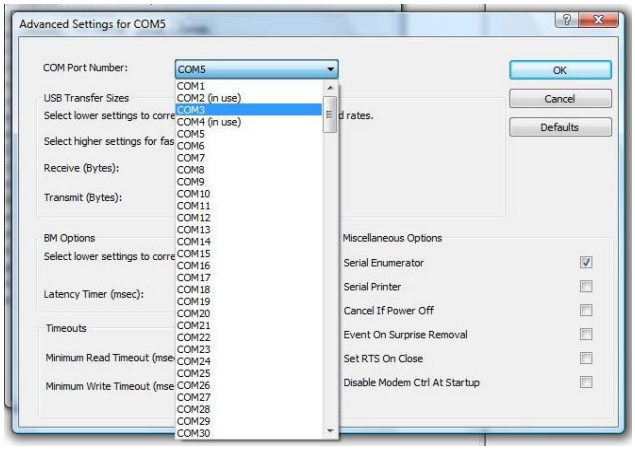


9. The Advanced Settings Window will display.



a. Select “Advanced”

10. Click on the down arrow next to com port number, and select the COM Port Number that is an open COM port between 1 and 10 that is open or not in use.



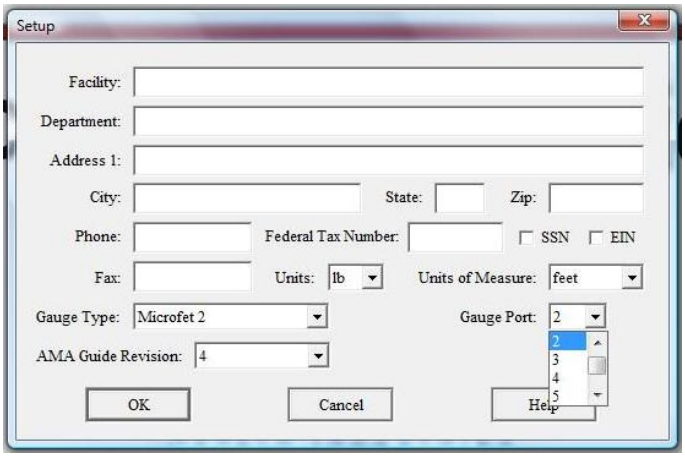
11. Select OK back to the computer management window.

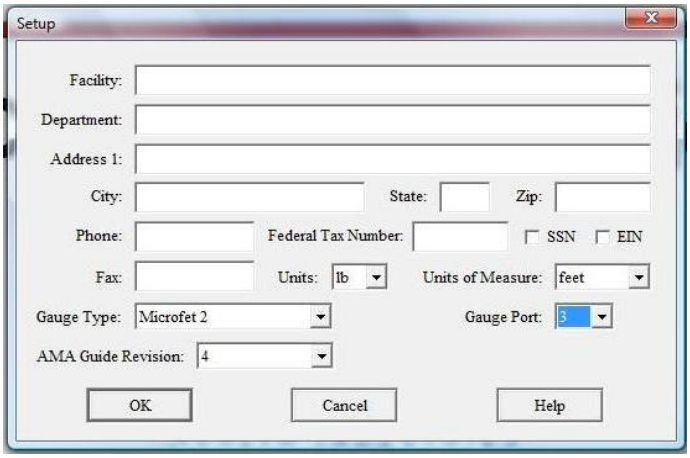
12. Push Reset button on the gauge.

13. Open the Clinical software program.

14. Select Utilities from toolbar and in the drop down menu select Setup.

15. On the right hand side of the setup window change "Gauge Port" to the number that corresponds with the COM number for the USB Serial Port.





16. Select OK out of the setup window.

17. Close software program for com port changes to take effect.

Note: If leave software program open and attempt to use any of the microFET devices with the software after changing com port setting, software will not operate. Need to close, then reopen program.

18. Push Reset button on the gauge.

19. Reopen the software program.

Note: USB Dongle: If take USB dongle out of com port while software program is open, and then plug USB dongle back into com port, the software will not operate with microFET device. If take USB dongle out, need to close program, plug USB dongle back in USB port, and then open software program.

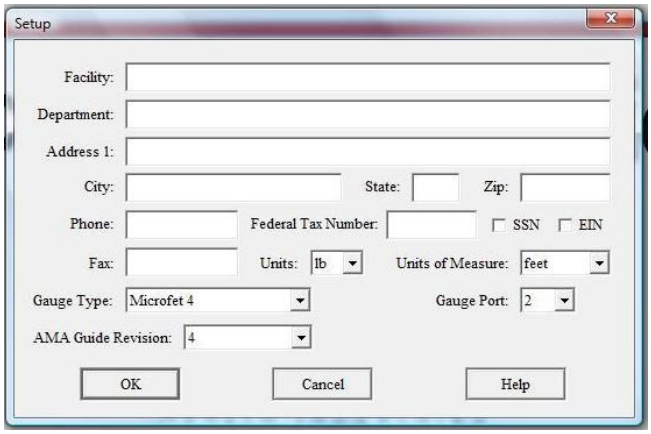
Initial One Time Setup

1. Select Utilities on the Menu Bar of the microFET software screen.
2. Select Setup.

In the Setup Dialog box, type in and complete appropriate information down to Units of Measure. Once Completed, click OK.

3. This is a onetime facility information setup. If your information changes it will be necessary to go back into the Setup screen to update with the proper information.

Setup dialog box



The facility information that is completed and filled out is used on various Clinical Software Reports.

This Setup dialog box (shown on previous page, p. 14) is used to setup the global settings for the clinical software testing modules. To bring up this dialog, choose Setup from the Utilities menu (ALT, U, S).

Gauge/Device Test Check

A gauge or device test can be done to check and ensure proper hook up and installation. For any microFET dynamometers to be used with microFET Clinical software, the following are instructions to set up microFET dynamometers to communicate with clinical software to be able to perform tests.

1. First, check to be sure the USB wireless receiver is connected to one of the USB ports on the computer.

2. Open the microFET clinical software by Double Clicking on the TBS Icon on Desktop on the computer.

3. In the microFET clinical software Program Manager Screen, Click on Utilities. In the Utilities drop down menu Click on Device Test. This will open Device Test dialog.

Device Test dialog

1. The Gauge Type you selected in the Setup dialog under Utilities will be the device test hardware diagram that will appear when Device Test is selected and opened. (microFET2 is used as an example). This dialog box is very useful for verifying communication between your gauge and software.

2. Select the unit of measure you wish to have output in the device test screen.

3. Single click with the left mouse button on the picture of the gauge. This should start the testing. As for example
with microFET2, force measurement readings from the gauge should appear in the box under Force.

4. To exit the device test dialog box, clicking again with the left mouse button will stop testing or you can press the Escape key on your keyboard.

Once communication is verified between the microFET dynamometer and clinical software, you can begin testing.

GETTING STARTED

Setting Up Windows Compatibility - Patient Files

Before opening the clinical software to set up patient files, the computer needs to be set up for patient file compatibility with Windows. Following are instructions for setting up compatibility with Windows to allow access to patient files.

Note: For Windows Vista and Higher Operating Systems.

The following instructions as example is with Windows Vista Operating System:

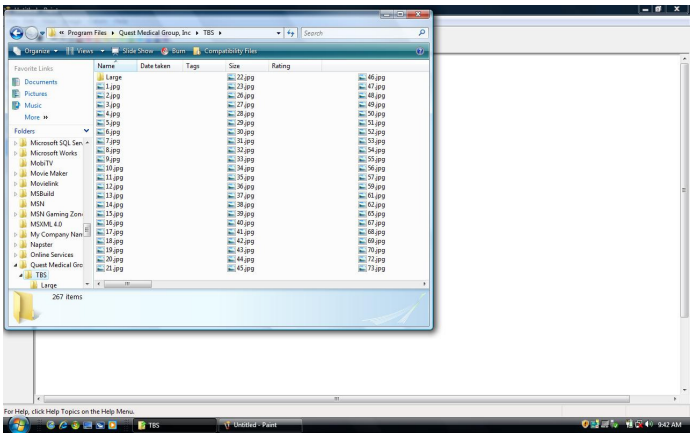
1. In Windows Vista, under Explore, go to C drive.

2. Under C drive, locate Program Files Folder.

3. Left click with mouse on either folder or arrow in front of program file folders.

4. Under the open program files folder, locate Quest Medical Group, Inc. file folder.

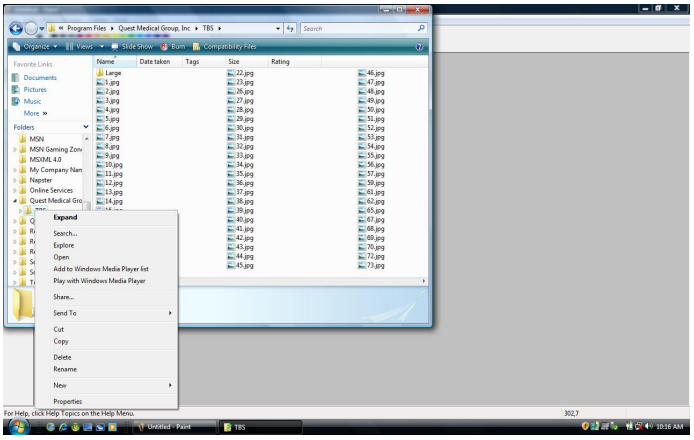
5. Select/click on Quest Medical Group folder. Under Quest Medical Group folder , select/open TBS file folder.



6. When TBS file folder opens, right click on TBS folder. A pop menu appears.

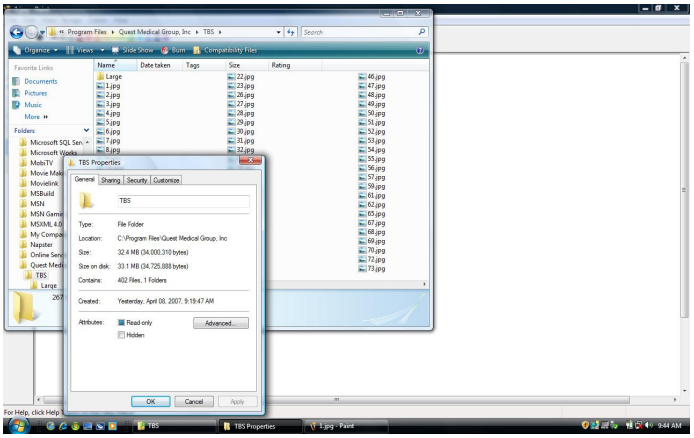
   Note: If folders are not displayed, click/select on Folders at bottom on left hand side.

7. In the pop up menu, left click/select on Properties.
8. The TBS Properties Dialog Box appears.



9. The TBS Properties Dialog Box appears.

10. Select, left click on the Security tab.

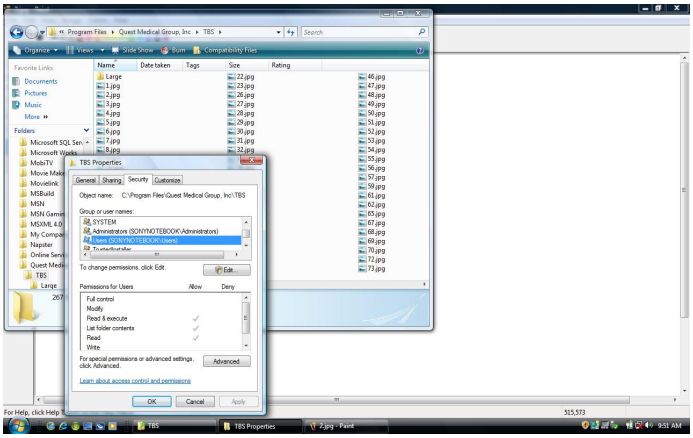


11. The Security Tab in TBS Properties Dialog Box opens/appears.

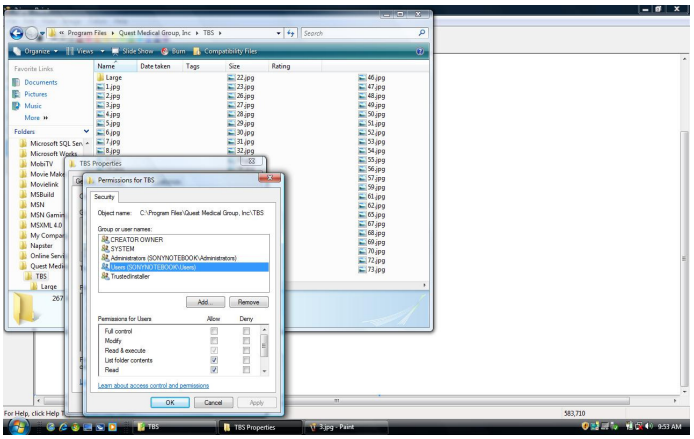
12. Select/highlight “Users”.

13. To change permissions, click Edit. Click on the Edit button.

14. If a message appears saying “Windows needs your permission to continue”, If you started this action, continue – Click/select Continue.



15. In the box where it lists the types of permissions to allow for users, under the Allow column, select/click in boxes for Full Control and Modify. Reselect “Users” if necessary.

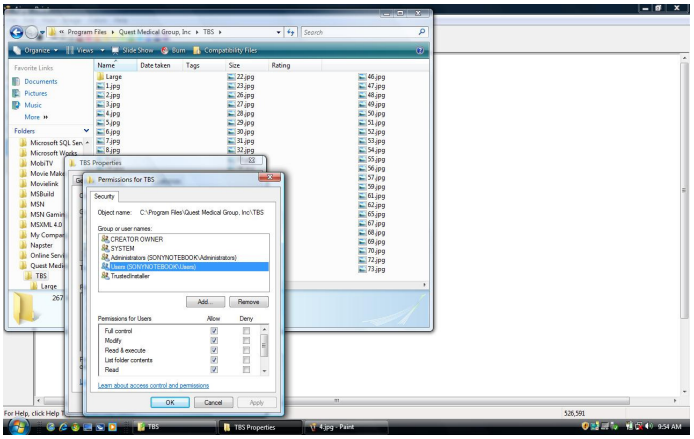


16. After you have selected, allowed for Full Control and Modify, a check mark will appear in the boxes.

17. Click Apply.

18. Click OK.

19. Click OK again.



20. Windows Vista Operating System is now modified to allow users to access/open TBS patient files in TBS software.

Using microFET Clinical Software

To start the software, double-click on the TBS shortcut on your desktop. This shortcut is automatically created when the software is installed.

Alternatively, you can click on Start in the bottom left hand corner of your screen, and either click on the TBS shortcut icon in the Start Pop Up menu, or choose Programs, Quest Medical Group, Inc., and TBS in the Start Pop Up menu.

The Clinical Software Testing Screen appears:

When this screen is displayed, you can begin using the Clinical software. This screen is the Program Manager Screen. The Program Manager is the software engine program from which all of the software testing modules are accessed and operated.

Exiting The Clinical Software

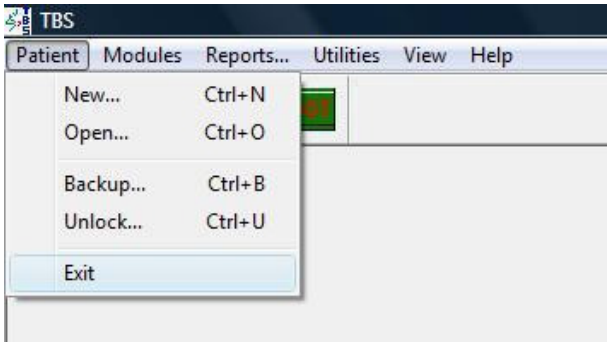
There are several options to exit the software:

1. In the upper right hand corner of the TBS software screen, Click on the red "x".

2. Double Click on the TBS shortcut icon in the upper left hand corner of the TBS software screen.

3. Single Click on the TBS shortcut icon. From the drop down menu select close to exit the TBS software.

4. Alt + F4 will also exit the TBS software.



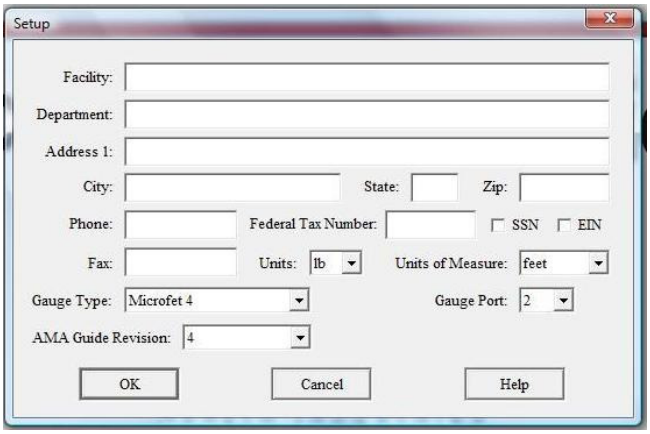
Initial One Time Setup (Instructions for Initial One Time Setup also listed on Page 21)

4. Select Utilities on the Menu Bar of the microFET software screen.
5. Select Setup.

In the Setup Dialog box, type in and complete appropriate information down to Units of Measure. Once Completed, click OK.

6. This is a onetime facility information setup. If your information changes it will be necessary to go back into the Setup screen to update with the proper information.

Setup dialog box



The facility information that is completed and filled out is used on various Software Reports.

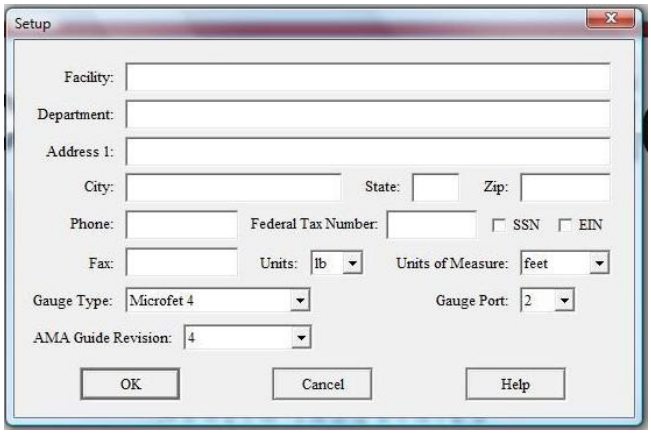
This Setup dialog box (shown on previous page, p. 14) is used to setup the global settings for the clinical software testing modules. To bring up this dialog, choose Setup from the Utilities menu (ALT, U, S).

Software Setup for Use with microFET2 Dynamometer

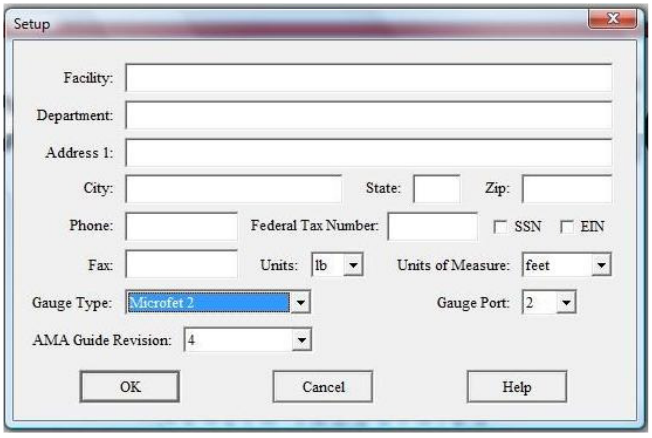
To set up your software to use with microFET2 dynamometer, the Setup dialog box is where you can select the gauge port (USB port) and gauge type for device.

Gauge Selection

1. For Gauge Type, depending on which microFET dynamometer and testing module you plan to use, if the appropriate microFET dynamometer is not listed in the window in the Setup dialog box for Gauge Type, Click on the down arrow to open up the drop down menu. Select microFET2.



2. From the drop down menu select microFET dynamometer you will be using in conjunction with selected software testing module.



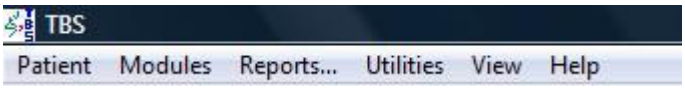
3. Click OK to save the facility information entered and gauge type selection made.

Testing – Overview and Commands:

Note: Before beginning testing, please check to make sure that your mircroFET dynamometer has the RF function turned on, the USB receiver plugged into one of the USB ports and confirmed with Device Test in the Utilities tab that your microFET is communicating with the software.

Commands Overview

In the top left hand corner of the main software screen, there is a Software Menu.



The Menu Commands allow:

1. Set up and recall patients.

2. Test modules to perform tests with your microFET dynamometer(s) you received to use with the software.

3. Set up, review, edit and print reports.

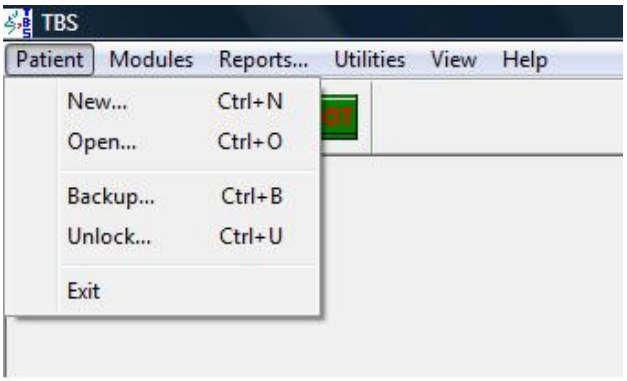
4. Set up Clinic information and set up of devices to proper communication.

5. Option to view Tool Bar and provides quick mouse access to many tools used in the software.

6. Help Section which provides assistance with the software.

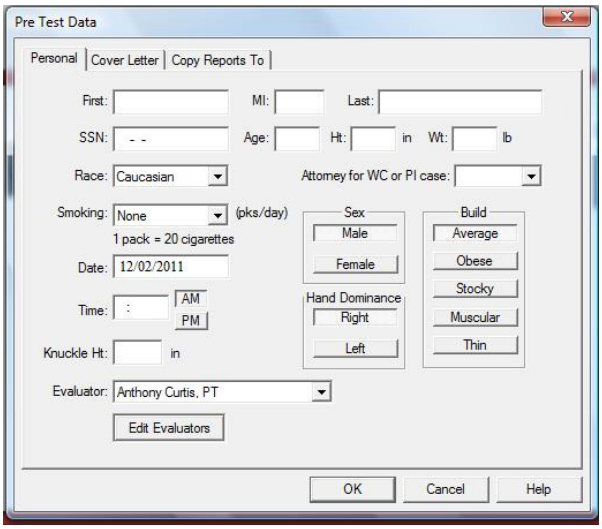
Commands – Patient

1. To open Patient options, go to Menu and select Patient.

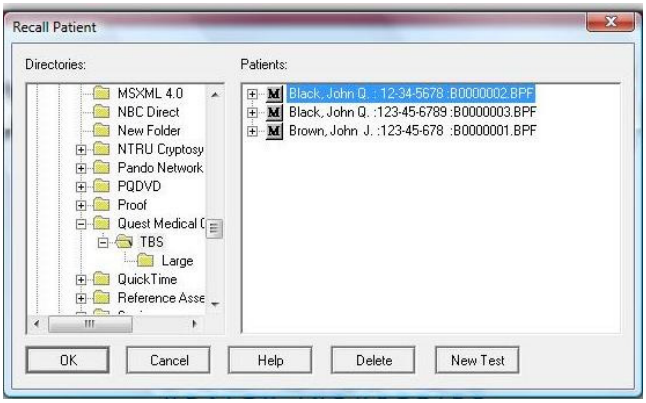


2. The Patient menu offers the following commands in the drop down menu:

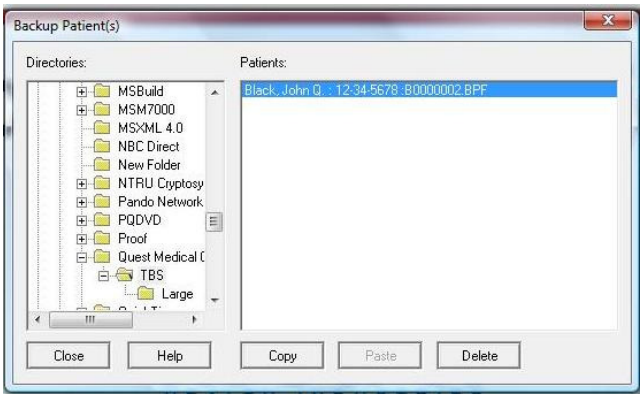
A. New Patient: To create a new patient file, select New in the Patient drop down menu. Pre Test Data dialog box appears to enter and save information.



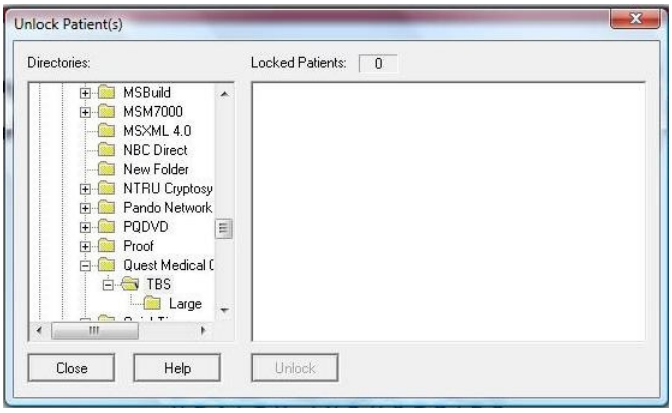
B. Open Existing Patient: To open and access an existing patient, select Open in the Patient drop down menu, to open an existing patient file to create new test for existing patient, open previous tests or delete patient or patient files.



C. Backup Patient Files: To backup patient files, select Backup in the Patient drop down menu to open the backup dialog box to select patient(s) to backup a copy of patient files.



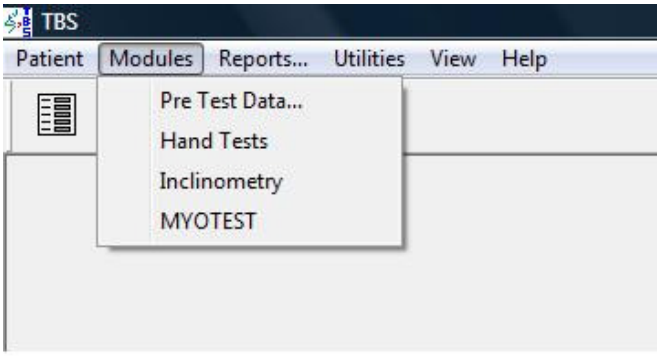
D. Unlock Patient Files: To unlock patient files, select Unlock in the Patient drop down menu to open the Unlock dialog box to show a list of patient files that are currently locked.



E. Exit: To exit microFET clinical software, select Exit in the Patient drop down menu to exit the software and end your session.

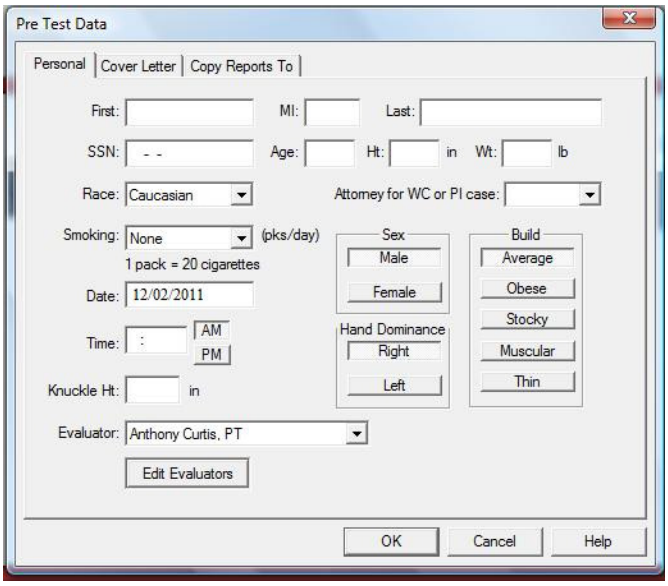
Commands – Modules

1. To open Modules options, go to Menu and select Modules.



2. The Modules menu offers the following commands in the drop down menu:

A. Pre Test Data: Select Pre Test Data in the Modules drop down menu to open the Pre Test dialog box. You can view the Pre Test dialog box to review information entered and update.



B. Test Modules: To open any of the test modules to perform patient tests, select Hand Tests, Inclinometry or MYOTEST in the Modules drop down menu, based on which microFET dynamometer you are using.

Check List Before Starting Testing/Using Software With microFET Devices:

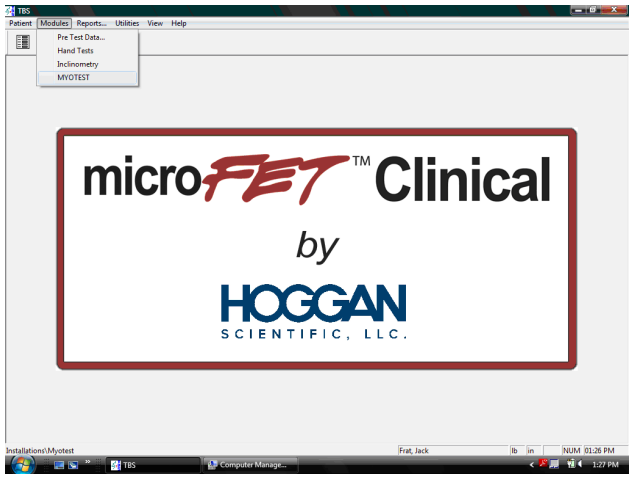
1. Clinical Software installed.
2. USB Driver installed for USB dongle.
3. Insert USB dongle(s) into USB port on computer.
4. Check to be sure device(s) are powered on/turned on.
5. Check battery power level of device(s) if not charged overnight.
5. Check to be sure wireless mode or function is turned on for device(s).
6. Check com port setting on computer for USB dongle for device matches or is same as com port setting in software.
7. Perform device test to ensure device is communicating with software.

Performing Muscle Tests (Myotest Test Module)

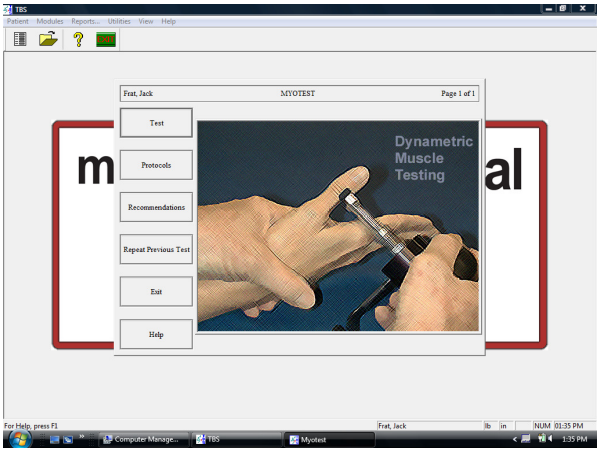
1. Before performing muscle test, have patient selected performing testing on, and select or click on New Test in the Patient Test Dialog Box.

2. Select Modules on the Top Tool Bar in the microFET clinical software test screen.

3. Select Myotest in the drop down menu.



4. Select Test - The muscle selection dialog box will open.



Muscle Test Selection Dialog Box Commands

Test Button
This button opens the Muscle Test dialog box to select muscle(s) for testing.

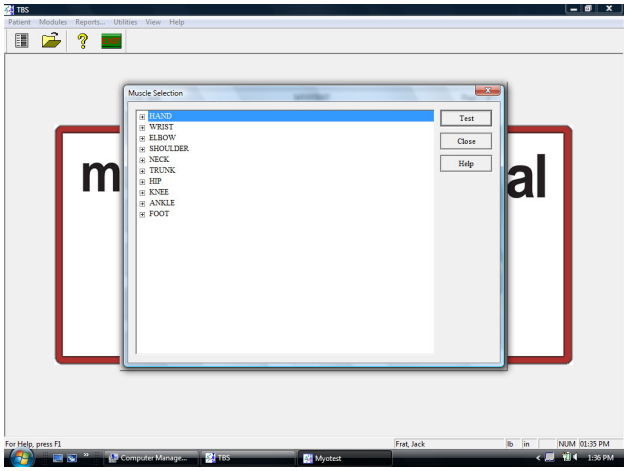
Protocols Button
This button opens the Protocol Selection dialog box.
Recommendations button Use this button to select a recommendation for the patient. This button will open the Recommendations Dialog Box.

Repeat Previous Test button Use this button for patients who are returning for further testing. For example, Mr. Jones has six muscles tested on January 15th. On January 22nd he returns to have the same six muscles test again. Instead of selecting the muscles all over again choose this button and you'll be taken straight to the testing screen with all six muscles already selected.

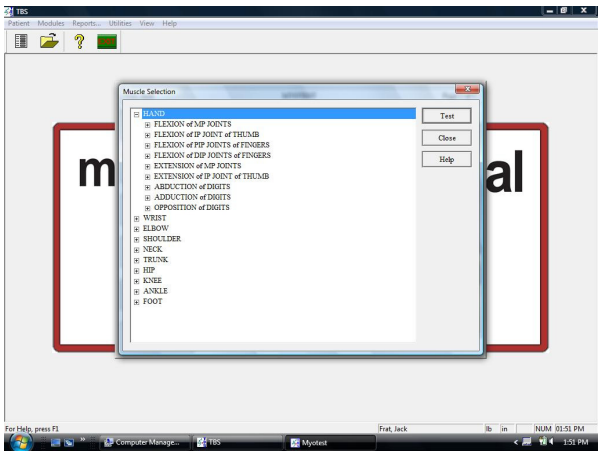
Exit button Use this button close the Myotest application. You may also use the Esc key or common Windows application closing short cuts.

Help button This button opens the main help screen.

5. In the muscle test dialog box, the muscle tests are grouped or broken out in regions of the body.

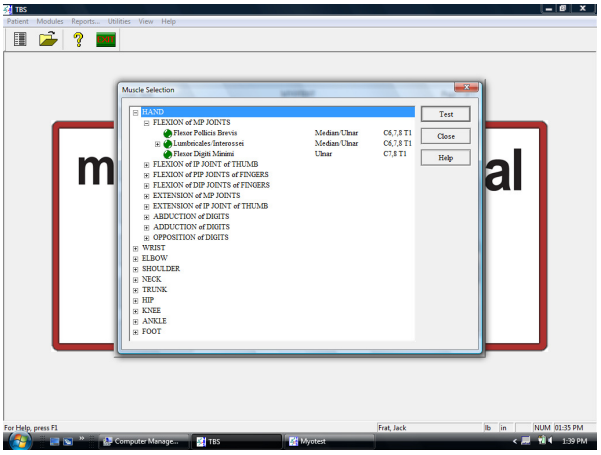


6. Select muscle test(s). To do so, click on the plus (+) sign that is next to the area of the body (Hand, Neck, Trunk, etc.) that you wish to perform muscle test(s). The plus (+) sign(s) that you click on for the area or region of muscle tests you want to perform, expands section to show muscle tests to select from.



7. Select, click on the plus (+) sign(s) next to the muscle or muscle groups wish to test. The same result can be accomplished by using the left and right arrows on the keyboard.

8. The muscle group expands, showing dark green dots (circle). Dark green dots indicates that the muscle test is not selected or has not been tested. Click on the dark green dot of the muscle or muscle test(s) you wish to perform.



9. The dark green dot will change to bright green dot, indicating that that muscle(s), depending on the number dark green dots selected, is a selected muscle(s) to be tested for patient.

This dialog box is used to select the muscles that you wish to test. To expand or collapse a section click on the + or - that is located to the left of the selection. The same result can be accomplished by using the left and right arrows on the keyboard.

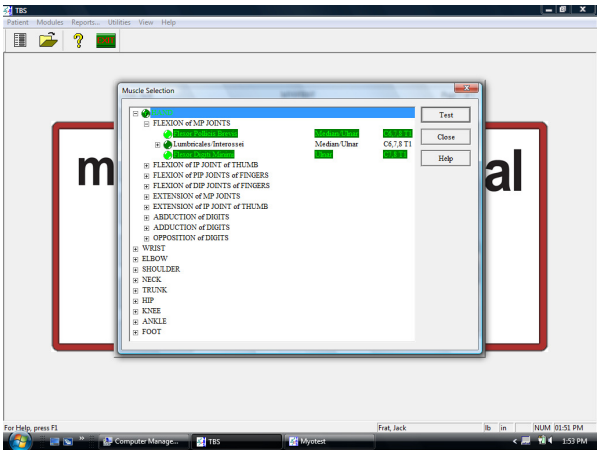
Only the selections with a  to the left of them may be selected. Below is a list of what each color represents:

 The item is selectable.

 The item is selected for testing.

 The item has been tested.

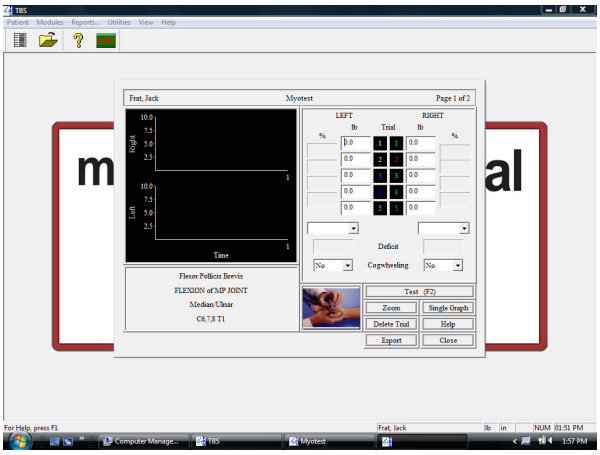
Upon reentering the muscle selection dialog box, it will automatically expand to show which items have been selected and tested.



10. After selection of the muscle(s) to test, click on Test.

11. The first muscle test screen will appear of muscle(s) selected for testing.

Note: For muscle test positioning of the device, click on the photo near the bottom center of the muscle test screen. Clicking on the image will expand the photo to full screen to view testing technique/positioning for the associated specific muscle test. To minimize image and return to test screen, click on image.



Myotest Module Initial Screen/Dialog Box

This dialog box is used to test those muscles which you have selected. If a gauge is used to collect data a force curve will be produced. You're give 8 seconds to complete an exertion; however, most break testing takes only 1-2 seconds. If a gauge is not used a bar graph reflecting the entered peak force will be drawn.

Buttons

Test: Opens the Force Dialog box. When a valid gauge is selected this will take you through an automated testing process. If the muscle is bilateral one side will be tested then the other. To jump to the opposite side before five exertions have been done press the space bar while the Force Dialog box is up.

Zoom: Opens the Zoom Curve Dialog box.

Delete Trial: Deletes the selected exertion. All tests for that side that are located after the selection will be moved up.

Single/Split Graph: Toggles the graph between single and split views.

Help: Brings up this help screen.

Close: Closes the Muscle Test dialog box.

Picture: Enlarges thumbnail picture to a full screen picture.

Keys

F2: Same as Test Button.

Page Down/Up: Moves to the Next/Previous selected muscle. Page number is shown in upper right corner or dialog box.

F6: Enlarges thumbnail picture to a full screen picture.

9. Perform Muscle Test(s):

a. Muscle Test Selected. At top left of muscle test screen each muscle test selected will be assigned a page number, based on the number of muscle tests selected for patient. (ie., Page 1 of 2)

b. On right side of muscle test screen there are 5 numbered boxes under LEFT and RIGHT. These are five (5) trials for muscle testing that can be performed for left side and right side of body. Only two consecutive tests with valid repeat trial consistency is required, but 5 trials are provided for both left and right side of body for the muscle being tested. Each test trial number is color coded.

c. The numbers for the trial tests for LEFT and RIGHT sides of the body are color coded. The color of the number tested will correspond to the color of the trial test that will be displayed in the left/right sides of the graphs located on the left side of the muscle testing screen that plots the force being exerted against time elapsed in the graphs.

10. When ready to perform muscle test for muscle selected in test screen, click on the Test button, or press F2 on your computer keyboard. For performing the test trials, the software defaults to start with the LEFT side of the body for the muscle test. During the muscle test trial, a bar graph indicator showing time in seconds will appear. As each second elapses for the test a square will appear in time bar graph. A slight "click" noise will also be emitted for each second elapsed, if volume is turned on, on computer.

10. Perform muscle test trial(s) on patient with muscle test dynamometer.

11. Once you have completed two (2) consecutive valid tests for one side of body which will be indicated on software screen indicated by VALID for the left side of the body, you can move to next set of trials on right side of body, by selecting or clicking Cancel with the cursor/mouse in the muscle test screen, and then click on first box of first trial for opposite side of body to test.

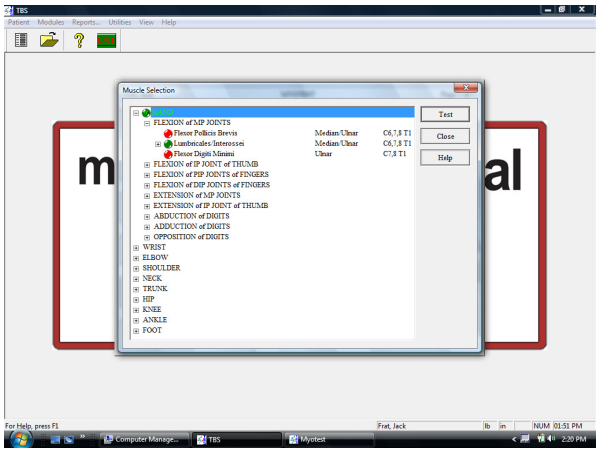
12. Complete muscle test trials on RIGHT or opposite side of body until have two consecutive valid tests. Software muscle test screen will indicate VALID for right side on software screen. Then complete muscle test trials for left side of body. Below is example of completed muscle test for both left and right side of body for muscle selected.

13. After completing testing in current Myotest muscle test screen, to move or proceed to next muscle test, press on the Page Down key on the computer keyboard. Next muscle test selected will be numbered with page number (ie., Page 2 of 2).

14. Complete all selected muscle test(s) for patient, using Page Down key to advance to next test.

15. When you have completed all of the tests selected in the Myotest muscle test module, click on or press the Escape key on the keyboard.

The Muscle Test Selection Dialog Box appears. The muscles that have been tested, will be indicated by a red dot next to the muscle test(s).



16. The Muscle Test Selection Screen opens. The muscle tests performed will now have muscle(s) selected.(Esc) button on your computer keyboard once to take you back to the Myotest Module Test Screen, or twice to go back to the main microFET Clinical Software Test Screen.

17. For other test modules to access (Hand Tests and Inclinometry), select either in the Modules drop down menu, and you will be taken to the appropriate module test screen.

Protocols (For Myotest Test Module)

1. In the microFET Clinical Software Main Screen, select Module in the Top Tool Bar.

2. In the drop down menu, select Myotest.

3. In the Myotest Dialog Box, click on or select Protocols button.

4. There are two options - Create New or Edit Existing. To create new protocol, click on or select New.

A. Create New - Create Own Protocol

1. Select New.

2. Name the Protocol you are creating.

3. In Standard Box, select test(s) by clicking on the Plus Sign (+) of area you wish to focus on. Select muscle test(s) by clicking on the Dark Green Dots (some muscle tests will also have a plus sign (+) next to them. Clicking on this will show the specific muscles that can be tested for that type of muscle test.)

4. If you wish to perform a test that is not listed in the software, you can create a Custom Test in the Custom Box. To do this, click on the New button on the right side of the Custom Box. Complete the New Muscle/Movement Template, and click OK. The test you created will appear in the Custom Box. To add this test to your Protocol, click on the Test name and click the Vertical Rectangular Box with an arrow. This Arrow is located o the left of the Custom Box.

5. Add Test o Protocol List by clicking on the Vertical Rectangular box with an arrow. This button is located to the left of the Standard Box. Tests will automatically arrange themselves alphabetically.

6. After selecting and adding all tests that you wish to be included in the Protocol, click OK.

7. This Protocol will now appear in your Protocols list. To use Protocol you created, simply highlight in the Protocols Screen, and click on the Test button.

8. If you no longer want that Protocol created stored in your Protocols, highlight the Protocol name, and click the Delete button. The created Protocol will be deleted.

B. Edit or Use Existing or Preset Protocols (Pre-Set Protocols are based on nerve endings)

1. Select the protocol you wish to use by clicking/highlighting the protocol.

2. Click on Test to perform the tests for that Protocol or Click Edit to view the tests that a protocol includes or to make changes to an existing Protocol (Add or Delete Tests).

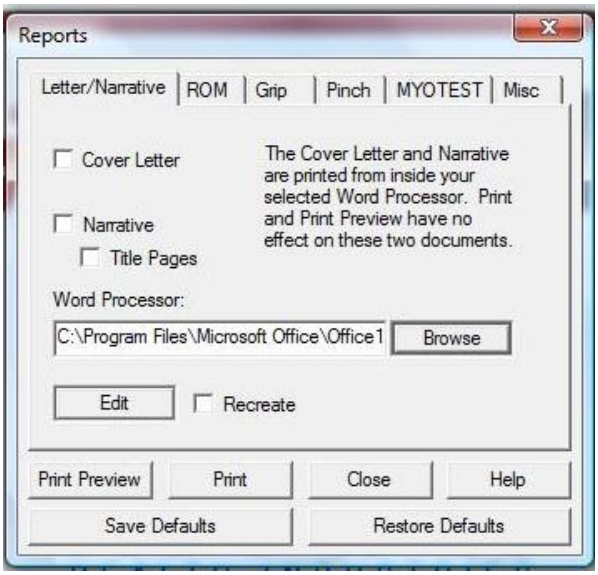
3. To add test to existing Protocol, follow steps 7-9.

4. To Delete a test from existing Protocol, highlight the test you wish to Delete, then press the Delete Key on your computer keyboard.

5. When you have completed your editing, click OK to save, or click Cancel button if you do not want to make the change.

Commands – Reports

1. To Access Reports, select Reports in the Commands Menu. The Reports Menu automatically pops up the Reports dialog box.



Reports menu commands

The Reports Menu (ALT, R) has no sub menu. It automatically pops up the Reports sheet as shown below:

This sheet is dynamic and only tabs for those modules you have installed will show up.

The Cover Letter and Narrative are sent to the word processor of your choice. We recommend Microsoft Word. The files are created in Rich Text Format (RTF) and use tables to line up columns throughout, so an advanced word processor is recommended. To make sure any changes remain with the patient file use the save feature on your word processor and DO NOT save in another format or as a different name.

Use the browse button to select the location of your word processor.

If you have changed test data since the creation of your Cover Letter or Narrative you must select the recreate check box to incorporate these changes. However, this will overwrite any modifications you have previously made to the document. You may want to save your changes to a different file, so you can copy and paste them to the newly created file.

Under the Misc Page there is a check box that allows you to rotate verticle text 180 degrees. On the graphic reports with verticle Y-axis text the text is meant to go from bottom to top; however, some printers reverse this printing. Select this check box if your printer is printing top to bottom.

The Save Defaults button is a time saving feature if you tend to print the same reports for all of your patients. Select those reports which you wish to print then select the Save Defaults. Then any time you want to print these reports on a patient just select the Restore Defaults button.

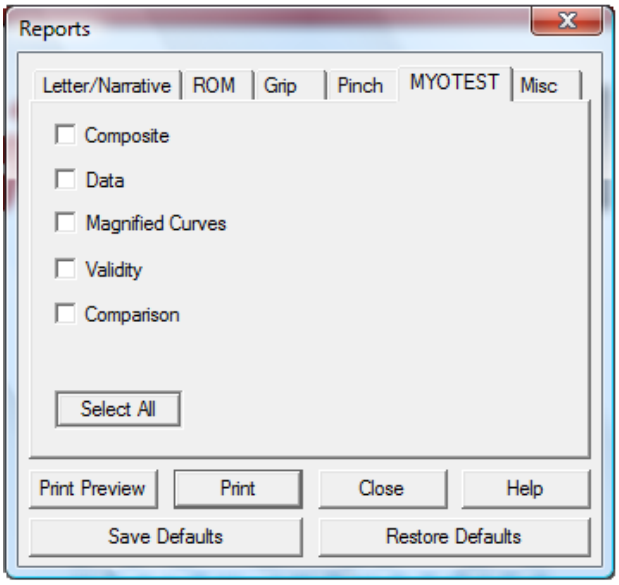
Any report whose label is on a button (e.g. Insurance Form) has data that can be accessed by clicking the button.

As noted on the Cover Letter/Narrative Page, Print and Print Preview have no effect on these two reports. This is accomplished from inside your word processor.

2. Select tab for which reports you desire to have printed. In the Letter/Narrative Tab, the Cover Letter and Narrative must be printed separate from all other reports and are sent to the word processor of your choice. We recommend Microsoft Word. The files are created in Rich Text Format (RTF) and use tables to line up columns throughout, so an advanced word processor is recommended. To make sure any changes remain with the patient file use the save feature on your word processor and DO NOT save in another format or as a different name.

3. Use the browse button to select the location of your word processor to print Letter/Narrative reports. Click on Save Defaults to save your word processor selected.

4. Graphic Reports - Myotest. To review and print graphic reports for muscle tests completed, select the MYOTEST tab. If all graphic reports are desired, click on the Select All button.



5. Select the graphic report(s) you wish to have printed. To print, select the Print button. To review the reports before printing, select Print Preview.

Commands – Utilities

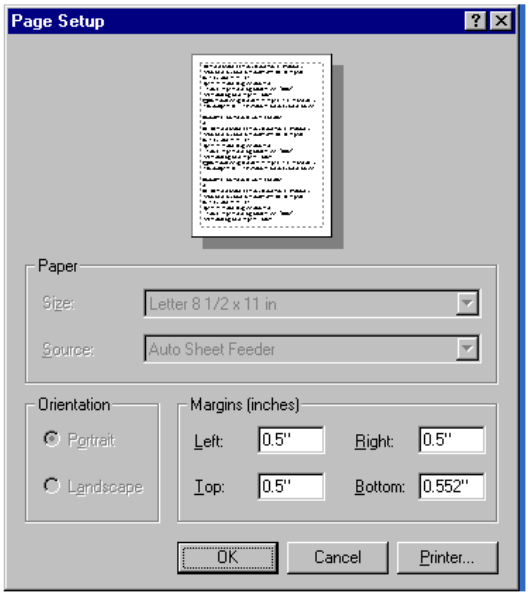
1. To open Utilities options, go to Menu and select Utilities.

2. The Utilities menu offers the following commands in the drop down menu:

A. Device Test: For information on Device Test, go to page 25.

B. Printer Setup: In the Utilities drop down menu, select Printer Setup.

1. This brings up the Printer Page Setup screen.



2. Choose Printer Setup from the Utilities menu (ALT, U, P) to view this dialog. This dialog allows you to set the margins for your TBS graphic reports.

C. Setup: For information on Setup to enter in facility information and select gauge type (microFET dynamometer) and select software com port, go to page 16.

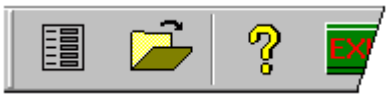
Commands – View

1. To open View options, go to Menu and select View.

2. The View menu offers the following commands in the drop down menu:

A. Toolbar: Use Toolbar command to display and hide the Toolbar, which includes buttons for some of the most common commands in microFET clinical software, such as Patient Open. To display Toolbar, click on in area in front of Toolbar, and a check mark appears next to Toolbar in the View drop down menu. To hide Toolbar, uncheck Toolbar in the View drop down menu.

The Toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in microFET clinical software.



1. Click To:

a.  Open a new patient. TBS displays a Pre Test Data property sheet, in which you can enter patient data.

b.  Open an existing patient. TBS displays a Recall Patient dialog box, in which you can locate and recall the desired patient.

c.  Display copyright notice and version of your copy of microFET clinical software.

d.  Exits microFET clinical software.

B. Status Bar: Use Status Bar command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button, and keyboard latch state. To display Status Bar, click on in area in front of Status Bar, and a check mark appears next to Status Bar in the View drop down menu. To hide Status Bar, uncheck Status Bar in the View drop down menu.

The status bar is displayed at the bottom of the microFET clinical software screen.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. Example: Selecting MYOTEST in Modules drop down menu.

This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not

to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate microFET clinical software information and which keys are latched down:

Indicator Description (From left to right above)

PATIENT: Shows the current loaded patient.

UNITS: Shows the current wt (force) units, lbs., Newtons or kgf. .

UOM: Shows the current unit of measure, feet or meters .

CAP: The Caps Lock key is latched down.

NUM: The Num Lock key is latched down.

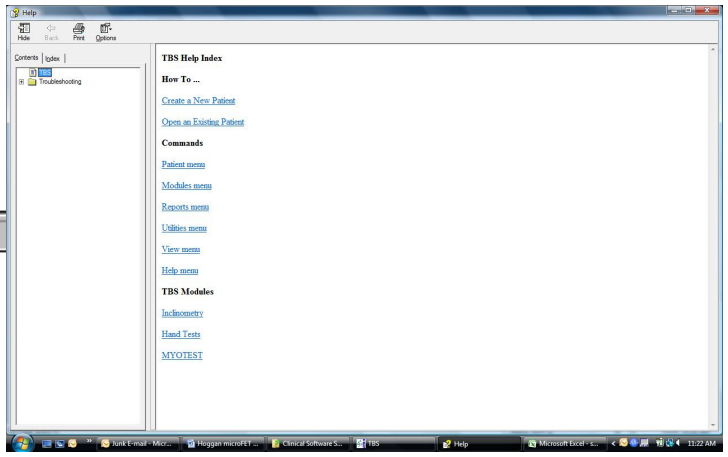
TIME: Shows the computer's current time.

Commands – Help

1. To open Help options, go to Menu and select Help.

2. The Help menu offers the following commands in the drop down menu:

A. Help Topics: To open Help, select Help Topics in the Help drop down menu.



The software screen displays an index to topics on which you can get help.

B. About: To open About, select About in the Help drop down menu.

About displays the copyright notice and version number of your copy of microFET clinical software.

Note: If you encounter an error message or cannot get the gauge to communicate with the clinical software, please contact Technical Support and Customer Service at Phone: 800-678-7888 / 801-572-6500, or by e-mail at contact @hogganhealth.net.

MICROFET CLINICAL SOFTWARE SUPPORT INFORMATION

For technical support and questions on software and hardware, please contact 800-678-7888/ 801-572-6500, or contact@hogganhealth.net.

CONTACT INFORMATION

For comments, questions or to request information, contact:

Hoggan Scientific, LLC
3653 West 1987 South, Bldg. #7
Salt Lake City, UT 84104
Ph: 800-678-7888 / 801-572-6500
Fax: 800-915-3439
E-mail: contact@hogganhealth.net
Website: www.hogganhealth.com

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Ph: 800-678-7888 / 801-572-6500
Fax: 800-915-3439
Email: contact@hogganhealth.net
www.hogganhealth.net

FDC FET Data Collection Software Manual

Hoggan Scientific, LLC

Software Manual 2016 Version 2.1.1

Table of Contents

FDC FET Data Collection Software Computer System Requirements

The following computer system requirements are recommended for Hoggan Scientific FDC software to function properly.

Minimum Computer System Requirements

- Pentium 450 MHz or higher
- Windows XP, Vista, 7, 8
- 1024 x 768 display
- 256 Screen Colors
- 64 MB RAM
- CD/DVD drive for software installation
- USB Port
- 1 GB free hard disk space
- Mouse
- 16 bit sound card with speakers
- Color Printer
- Microsoft Word 2003 or newer

Customer Support
If you have further questions about computer system requirements for running FDC software, installing the software, or require technical assistance, please contact Hoggan Scientific at 800-678-7888 / 801-572-6500 or by email at contact@hogganhealth.net.

Important Notice:
For customer service calls, it is necessary to have a telephone located within reach of the computer running the FDC software. This is vital during installation and technical support calls because you will have to access the computer while working with our customer service staff. Without a telephone located near the computer, Hoggan Scientific, LLC support staff will be unable to provide you with proper, timely service.

Product Return Policy
Purchased FDC software is non-returnable.

Sample Rate
Sample Rate is 100 samples per second.

***NOTE: Before installation of the FDC data collection software and driver for microFET and ergoFET devices, check to make sure that the computer and/or the user account installing the software and driver has full administrative rights enabled to allow for installation. Otherwise problems may be encountered with the install.**

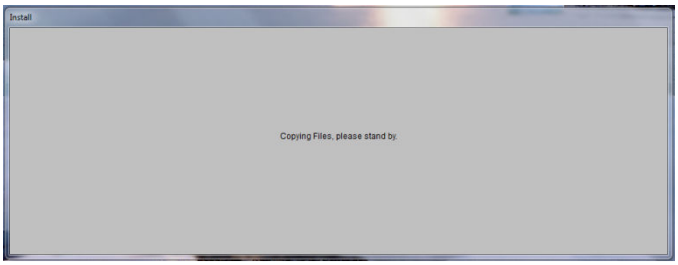
Software Installation

The following procedure describes the installation process whether you are installing new software or upgrading from a previous software version or windows operating system.

Auto Installation:

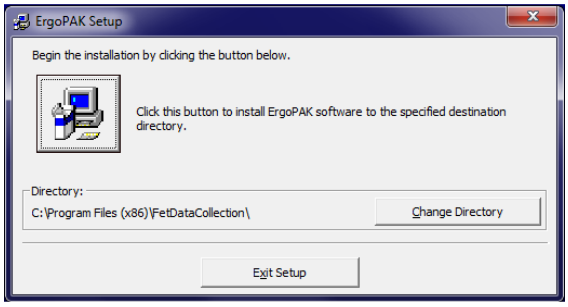
1. Start your computer and exit any applications that might be running.
2. Insert the FDC Software CD into the CD-ROM drive.
3. AutoPlay Window will appear on screen. Select Run setup.exe.

4. The set up application will start copying files.

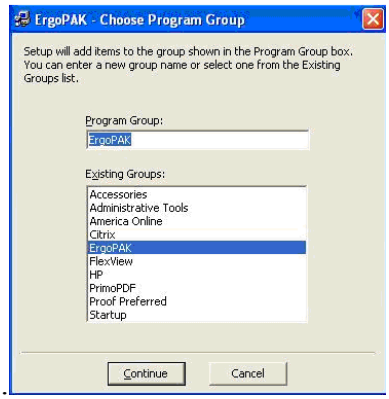


5. ErgoPAK Setup Screen will appear.

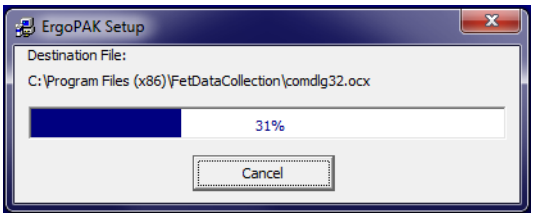
6. Click on the OK button.
7. To begin installation of the FDC software, click on the Computer Icon button, and Setup will install FDC in the default folder.
To install FDC software in a different location, click the Change Directory button and select the location. Then click on the Computer Icon button to begin installation. If you choose not to install FDC software, click on exit Setup button to exit the installation program.



8. Choose Program Group: Setup will add FDC software to the group shown in the Program Group box along with other program files in the Programs file, under default name FetDataCollection. If desired you can enter a new group name or select from the Existing Groups list.



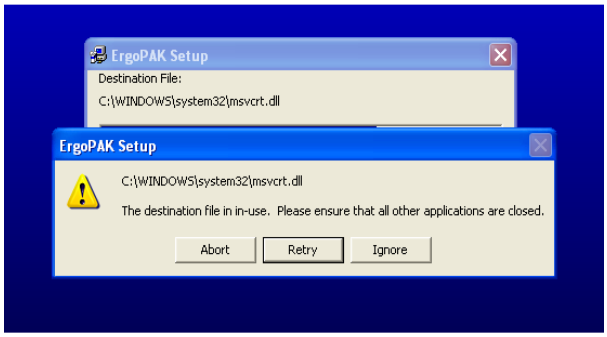
9. After selection is made, click on Continue. FDC software is now being installed to the Destination File.



10. During installation, one of the following messages will appear based on the operating system of the computer:

A. FOR WINDOWS XP: A message will appear during installation:

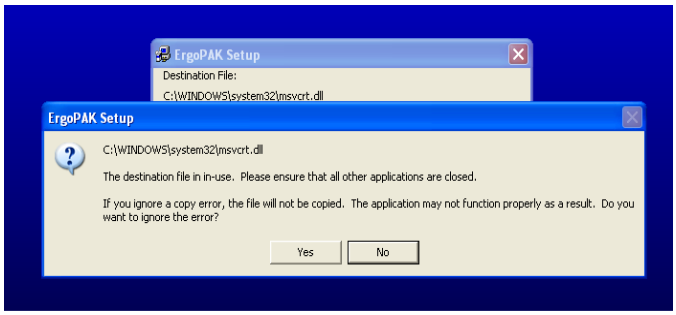
Destination File:
C:\WINDOWS\system32\msvcrt.dll
The destination file in use. Please ensure that all other applications are closed. (See software screen shot below)



- Select, click on Ignore.
- A second message will appear:
  C:\WINDOWS\system32\msvcrt.dll

  The destination file in in-use. Please ensure all other applications are closed.

  If you ignore a copy error, the file will not be copied. The application may not function properly as a result. Do you want to ignore the error?
  (See software screen shot below)



- Select, click on Yes.
- The software will now continue to install.

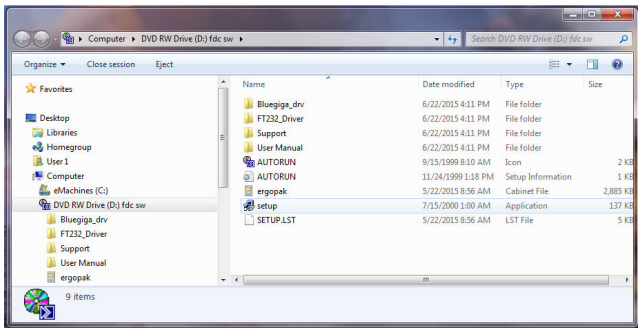
B. FOR WINDOWS VISTA: A message will appear during installation:

- Select, click on Yes.
- The software will now continue to install. A message will appear showing that the FDC software was successfully installed.

Manual Installation

If the computer does not automatically initialize the FDC Software that brings up the welcome screen, the following instructions are to install software manually:

1. Insert the software disk into the CD-ROM or DVD-ROM drive.
2. Click on Start button in bottom left corner of computer screen.
3. In Start menu select Run.
4. Type the following, which includes location of the CD-ROM or DVD-ROM drive for the computer. Following is an example: D:\setup.exe
   As option, click on Start button, then click Browse in Start menu, or open Windows Explorer. Locate the CD-ROM or DVD-ROM drive on the computer, and click on the drive.
5. A screen will appear of files listed on the software installation disk.



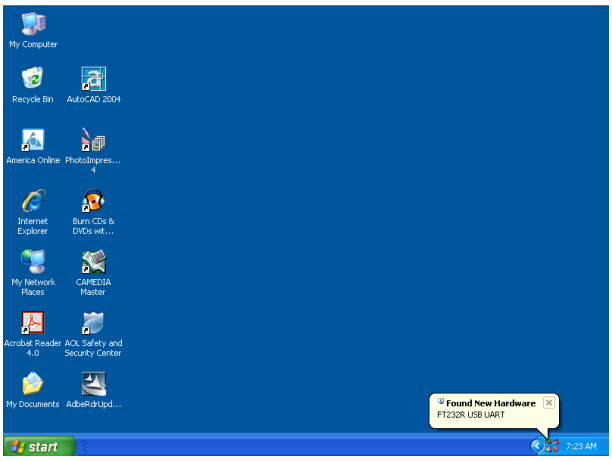
6. Select and click on the setup.exe icon.
7. Continue software installation under Auto Installation instructions, step #4.

Open FDC FET Data Collection Software

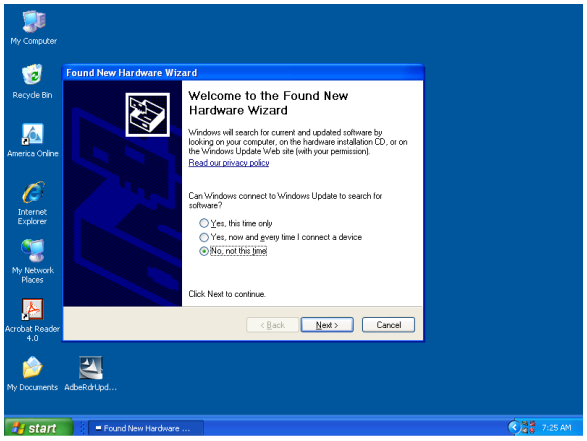
1. To access the software, go to Start button icon at the bottom left hand corner of your desktop and left click on Start.
2. In the Start menu, place the cursor over All Programs.
3. All installed programs on the computer are listed. Click on ergoPAK folder
4. The ergoPAK software icon appears. Click on the ergoPAK icon to start the program.
5. As option for software program, can create shortcut to desktop, and/or pin the software program to the Start Menu or Task Bar. Shortcut for program will appear as below on computer desktop screen.

USB Dongle Device Driver Installation microFET and ergoFET Products

1. Insert USB dongle included with software disk into a USB port.
2. On newer versions Windows Operating Systems, the computer may detect the USB dongle, and auto install the driver for the USB dongle, so that installing driver from software disk is not required.
3. If USB driver is not auto installed, install the USB driver from the software disk. Have software disk in CD tray prior to installing USB driver.
4. The Message Found New Hardware dialog bubble will appear on bottom right hand corner of the desktop computer screen.

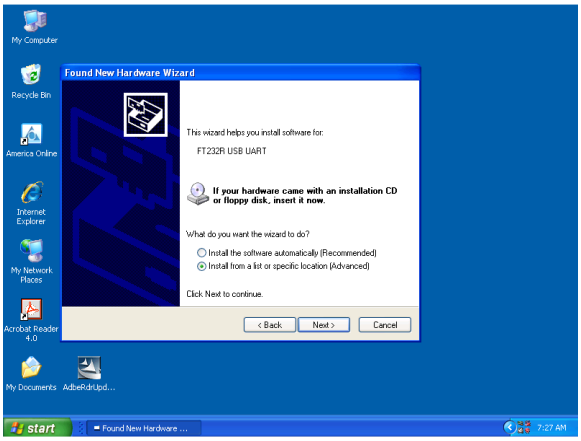


5. Click on the Found New Hardware dialog bubble.
6. The Found New Hardware Install Wizard dialog box will appear.

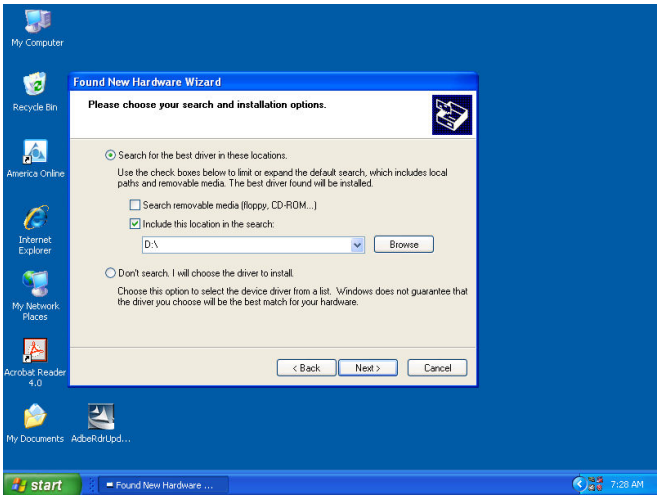


5. In the Found New Hardware dialog box, for the question – Can Windows connect to Windows Update to search for software? **- Select No, not this time.** Then click the Next button to continue.

6. The next Wizard dialog box will assist looking for the USB driver to install.



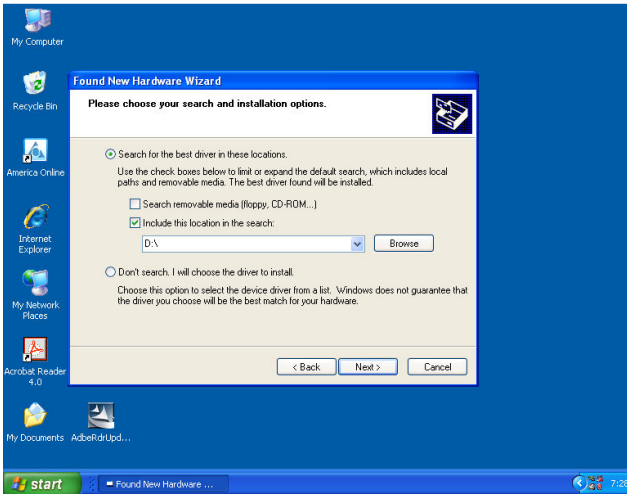
7. A question will appear – What do you want the wizard to do? **- Select (Advanced) Install from a list or specific location.** Then click the Next button to continue.
8. Found New Hardware Wizard – Please choose your search and installation options dialog box appears.



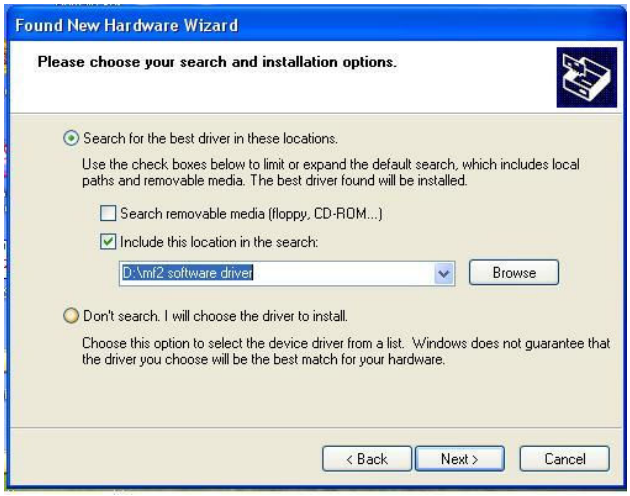
9. In this dialog box, If Search removable media floppy CD-ROM has a check in the box next to it, unselect this option.
   Select – Search for the best drive in these locations: Then click on the box next to Include this location in the search.

10. Next click on the Browse button. A Browse Folder Dialog box will appear. Locate the drive on your computer in which the software CD is in the CD tray.

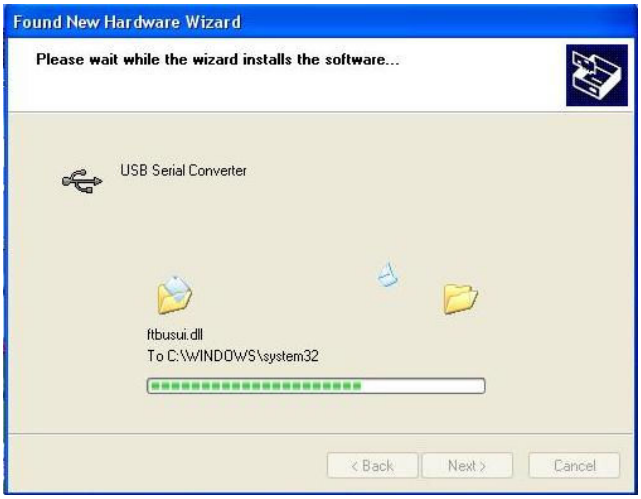
11. When you have located the drive where the software CD is located, click on the drive with your cursor to highlight. Then click the OK button and the bottom of the Folder Dialog box.
12. The CD Drive in which the CD that contains the mf2 driver (for microFET2 or ergoFET) is the destination location to select to search for the USB driver software



13. When you have located the drive where the software CD is located, click on the drive with your cursor to highlight. Then click the OK button and the bottom of the Folder Dialog box.
14. The CD Drive in which the CD that contains the mf2 driver (for microFET2 or ergoFET) is the destination location to select to search for the USB driver software.



15. Click on the Next button at the bottom of the Found New Hardware Wizard dialog box. The Hardware Wizard will locate and begin installation of the USB driver.



16. The Found New Hardware Wizard has finished installing the USB Driver. **Click Finish to close the wizard.**

17. The USB dongle (or USB connector box for corded models) is now ready for use with FDC Data Collection Software.

If you encounter problems installing software or USB driver, please contact Hoggan Scientific, LLC by phone at 800-678-7888/801-572-6500, or e-mail contact@hogganhealth.net, and one of our support staff will be glad to assist you.

Testing

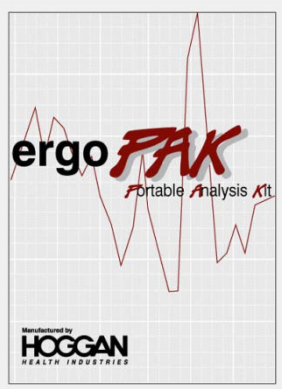
Device Set Up Prior to Software Use/Testing

1. Plug in the wireless USB dongle into available USB port.
2. Turn on your microFET or ergoFET device. Make sure the device does not go into sleep mode, as this will cause interruption in communication between device and software.
3. Check on device that RF or wireless mode is turned on. For wireless RF mode function, refer to the device user manual included with the unit.

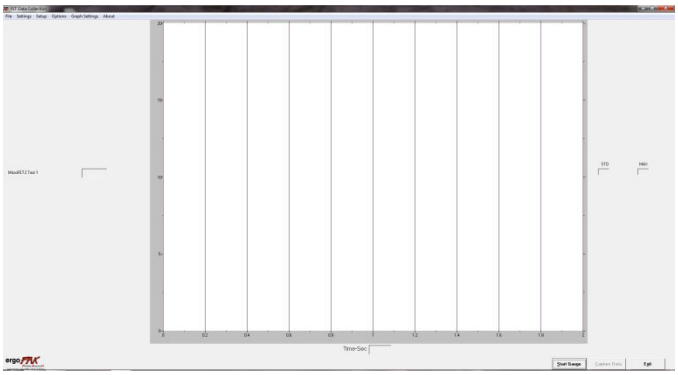
Open Software

1. To start software, click on the ergoPAK shortcut on your desktop, or select ergoPAK in Start Menu or Task Bar.

2. The software initialization screen appears.

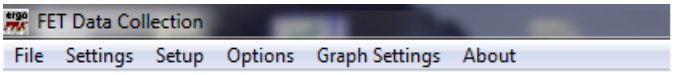


3. Software main test screen appears after approximately 2 seconds.

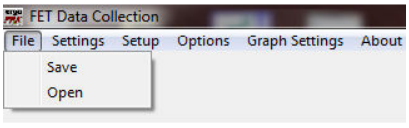


Software Menu

The software menu is located in the upper left hand corner of main software screen.



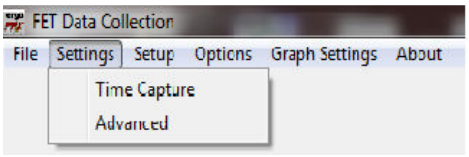
1. File Tab: File tab is for performing and saving tests in File tab, to allow to open up saved file in software to view data from test. Saving tests in File tab is option to normal default saving of test results.



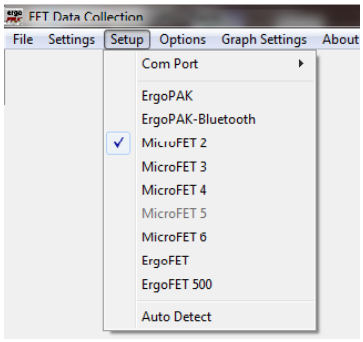
2. Settings Tab:
   a. Time Capture allows option to set Delay Time, Warning Time and Capture Time parameters in seconds to capture sample

points from device when away from computer.

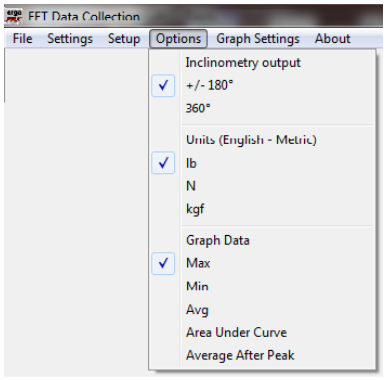
b. Advanced Settings allows option to select or set certain parameters or limits for test.



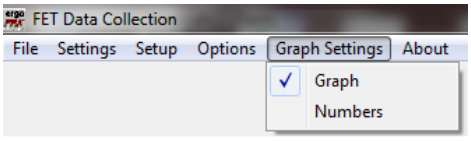
3. Setup Tab: Setup Tab is for selection of device to be used for testing; and check Com Port and Auto Detect Com Port to check and confirm communication of device with software.



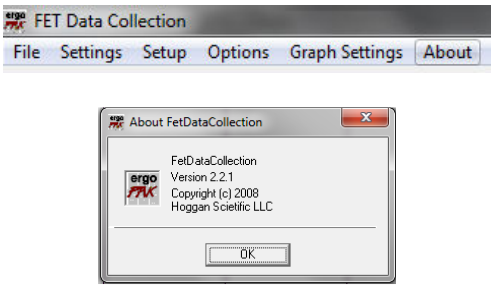
4. Options Tab: Options Tab allows to select unit of measure for device and output of test results, and graph data numerical readout display.



5. Graph Settings Tab: Allows to select to display output from the device in graph or numerical readout display in software screen during testing.

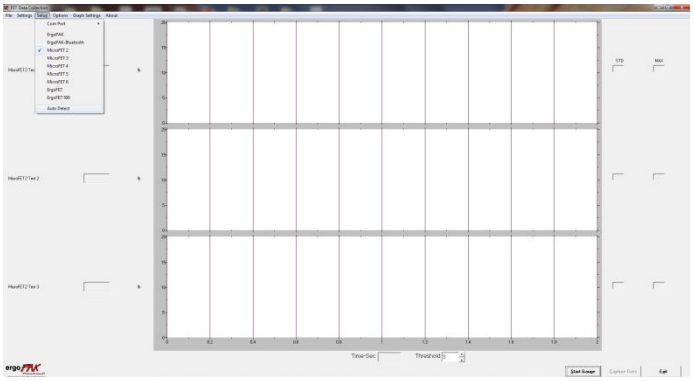


6. About: When click About, software version information is displayed.

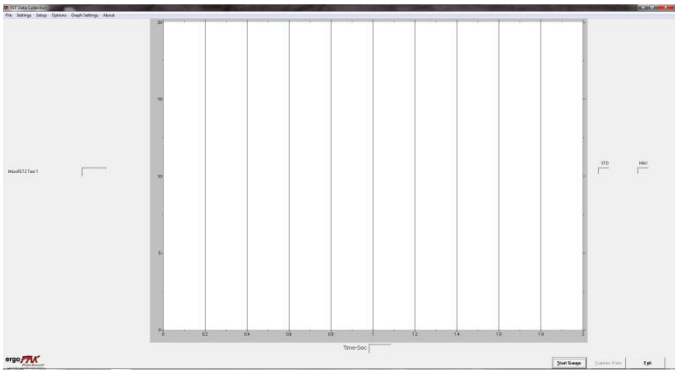


Device Selection and Com Port Set Up

1. In the FDC software main test screen, in the top left hand corner of the software screen go to and click Setup. The drop down menu will list the Devices, Com Port and Auto Detect.



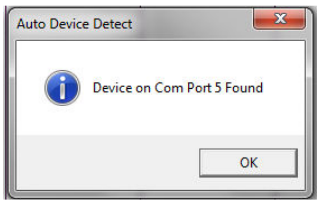
2. Select the appropriate device you are testing with.



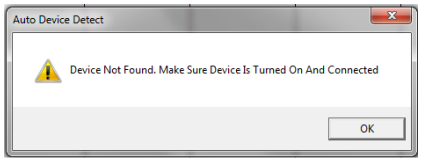
2. The software identifies and confirms the device connected, and device selected will be listed in the software screen (example microFET2).

3. The software should auto detect the com port for the device using. A com port setting does not need to be selected.

4. Check Com Port with Auto Detect: Under Set Up select Auto Detect. If com port in the software matches the com port assigned to the USB driver on the computer, a message will appear stating the com port found.



5. In the event the com port selection in the software do not match the com port setting selection on the computer, an error message Device Not Found will appear.



6. Device Not Found error message indicates that either device not powered on or com port settings do not match. First check to see that device is powered on. If confirm device is powered on, will need to check, set com ports manually.

7. For manual Com Port Set Up, go to Set Up and select Com Port. Note the current com port selection in the software.

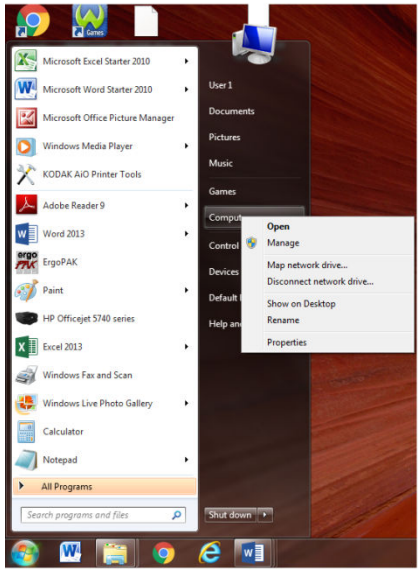
5. Com Port Setting Computer: To check the com port setting on the computer, follow these steps:

A. Go to the Start button located in the bottom left hand corner of the desktop screen.

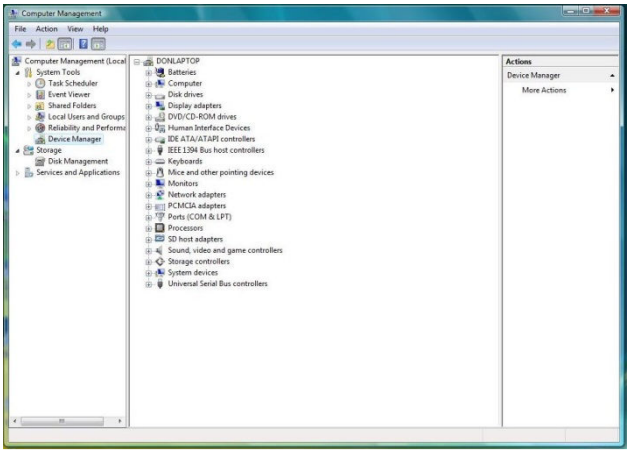
B. Click on the Start button, and the Start Pop Up Menu will appear.

C. In the Start Up menu, locate and right click on Computer

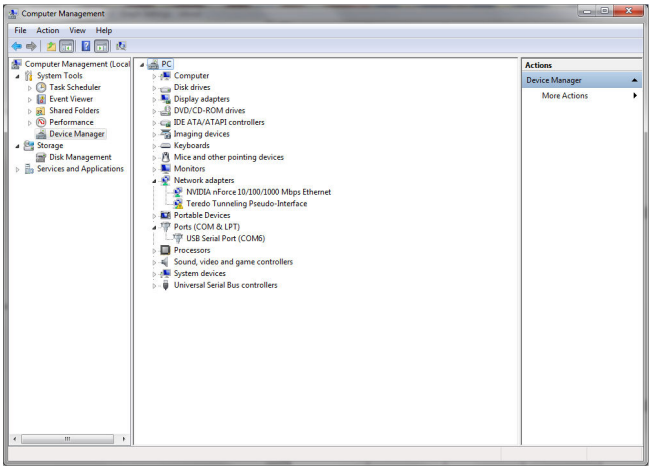
D. A drop down menu will appear. Select and right click on Manage.



E. The Computer Management Screen will appear. On the left side of the Computer Management Screen, select and click on Device Manager, or click on the plus (+) sign in front of Device Manager. A list of devices will appear on the right side of the Computer Management Screen.

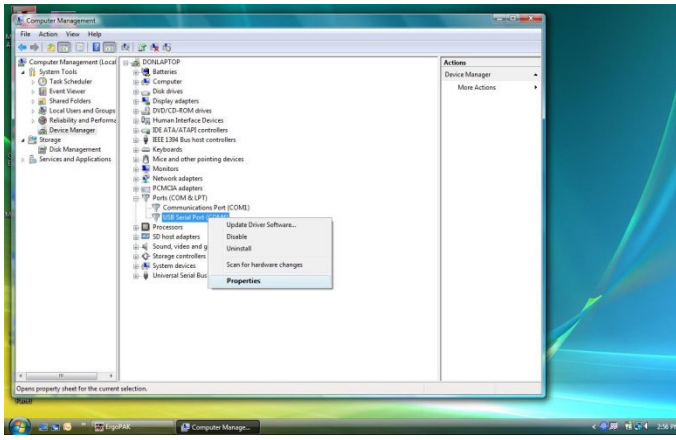


F. In the list of devices, locate Ports (COM and LPT). Either select/click on Ports (COM and LPT), or click on the plus (+) sign in front of Ports (COM and LPT). This will open up to show the COM and LPT ports currently being used.

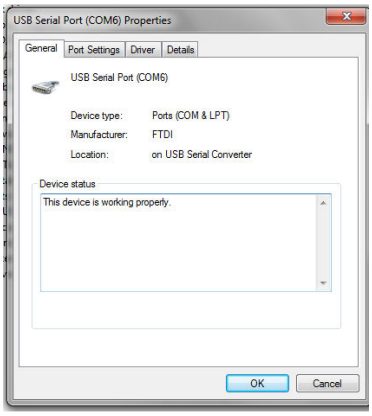


G. In Ports (COM and LPT), USB Serial Port COM with a port number shown after COM (1, 2, 3,….) should be listed.

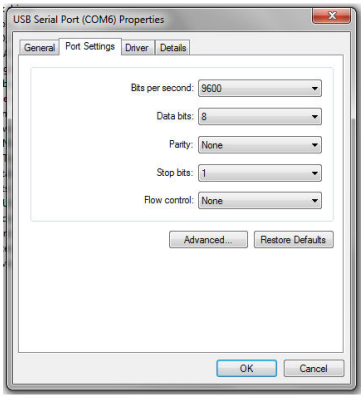
H. Select and either Right click or double click on the USB Serial Port COM_. A drop down menu will appear. In the drop menu select Properties.



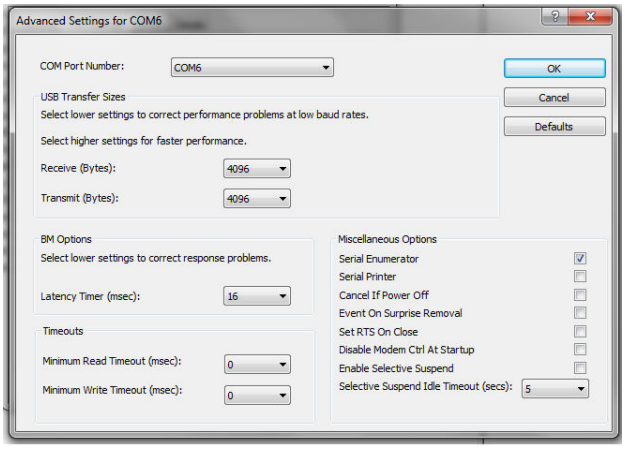
I. The USB COM Port Property Windows appears.



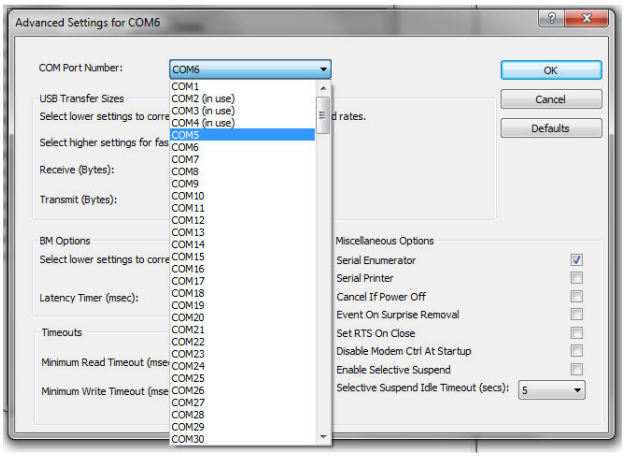
J. Select Port Settings Tab.



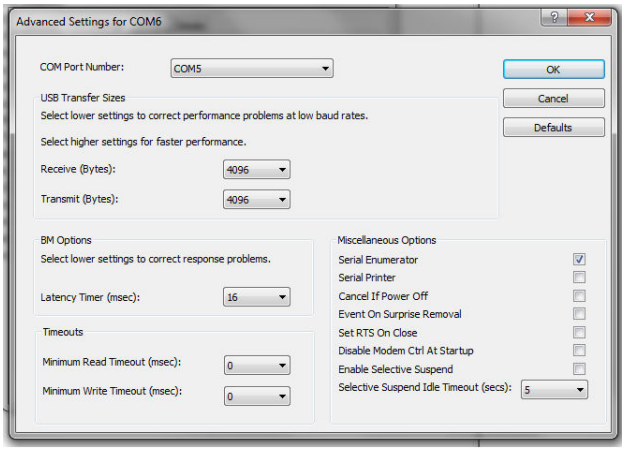
K. Select Advanced button in Port Setting Tab. The Advanced Settings Window will display.



L. If com port is not the com port selected for the USB driver by the computer when driver was installed does not match com port selected in the software, the com port needs to be changed to be able to have the device communicate with the software. Click on the down arrow next to com port number, and select the COM Port Number that is an open COM port.

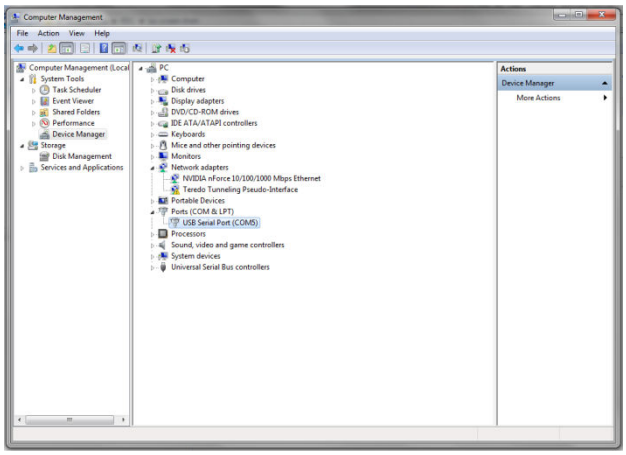


M. Selected com port now shows in the Advanced Settings Window.



N, Click “OK” in the Advanced Settings Window USB Serial Port Properties Window to bring you back to the Computer Management Window.

O. In the Computer Management Screen the new selected com port will show in Ports.

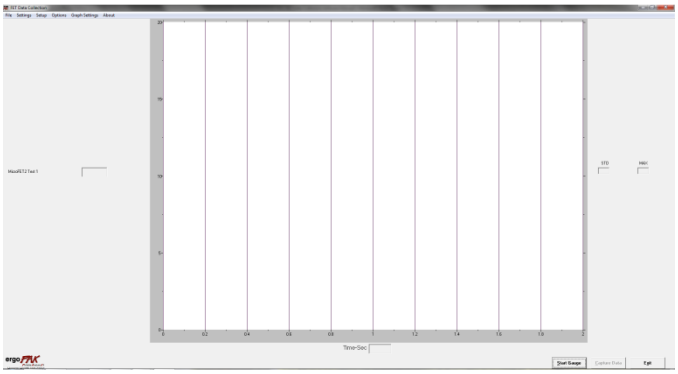


P. Close out or “X” out of the Computer Management Window.

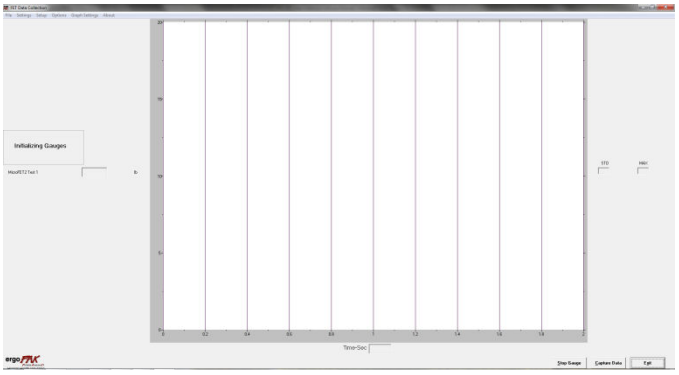
Q. Go back into the software and click on Setup in the Menu. Click Auto Detect. Message will appear that com port found.

Testing

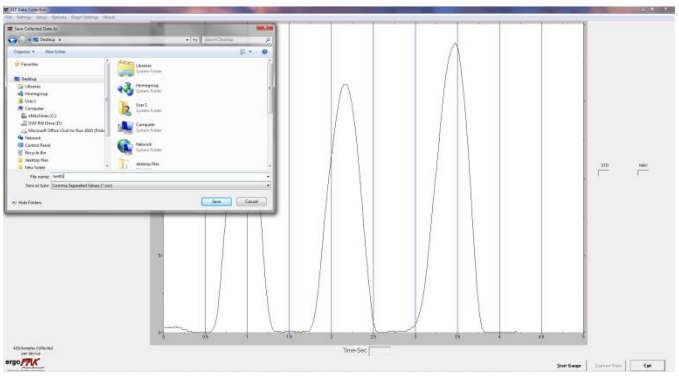
1. To begin testing, click on Start Gauge button in the bottom right hand corner of software screen.



2. Initializing Gauges message will display on the software screen.



3. The gauge connected is now reading live in the software.
4. To capture the test data to save be able to save as a file, click on the Capture Data button located in the bottom right hand corner of the main software screen.
5. Perform your tests, exertions with gauge. The data will be captured by the software to be able to save the completed test.
6. The Capture Data button will change to Stop Capture Button. At the end of test you perform, click on the Stop Capture button.
7. At the end of the completed test Save Collected Data As dialog box appears.

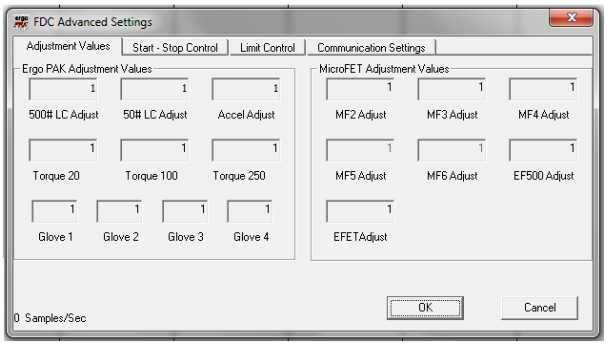


8. Name the file how you want it saved. The file will be saved in a .csv format. The .csv format you can open in any spreadsheet application program that recognizes that format.

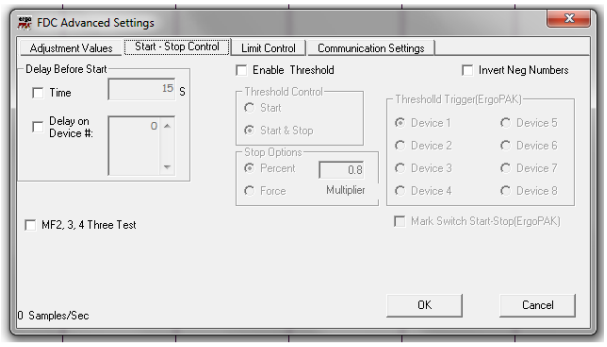
microFET2/microFET3/Handgrip Single Continuous or 3 Trail Test Capture Selection Options

The Software has feature to select between single continuous test data capture, or 3 separate trial tests data capture for microFET2, microFET3, and handGRIP. Instructions:

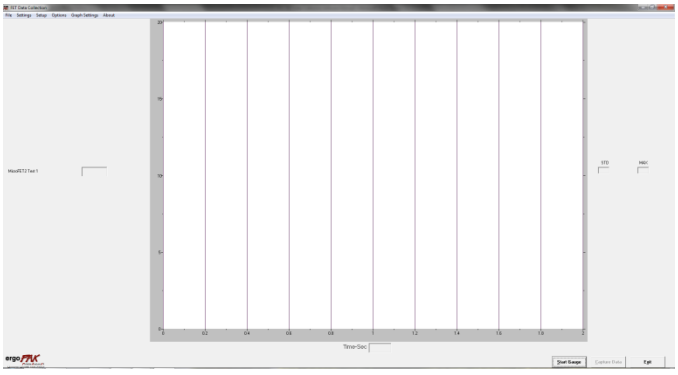
1. In Menu click Settings Tab.
2. Select Advanced.
3. Caution Window Appears. Please note to take care when making changes in Advanced settings.
4. FDC Advanced Settings Windows appears.



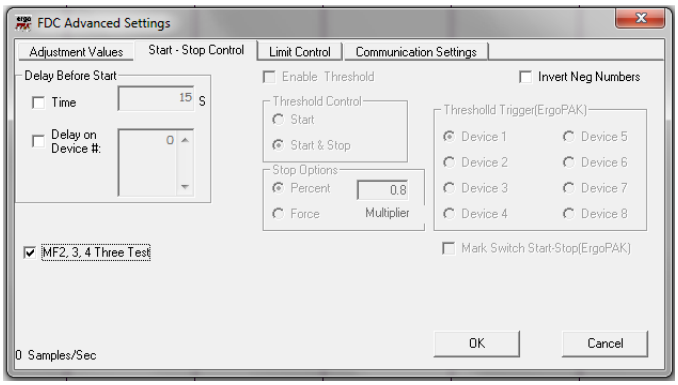
5. Click on Start – Stop Control Tab. Start-Control Window appears. MF2, 3, 4 Three Test Selection box is located in the bottom left corner of FDC Advanced Settings box.



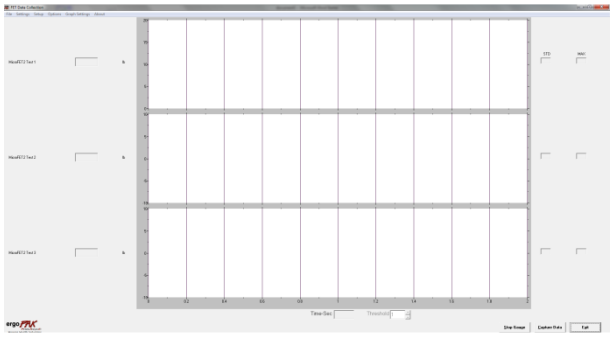
6. To perform a single continuous test, leave box unchecked same as above software screen, then click ok. Main software screen will show single continuous test selection.



7. To perform 3 single exertion test trails, click box and check mark will appear in box as shown in software screen below. Then click ok.



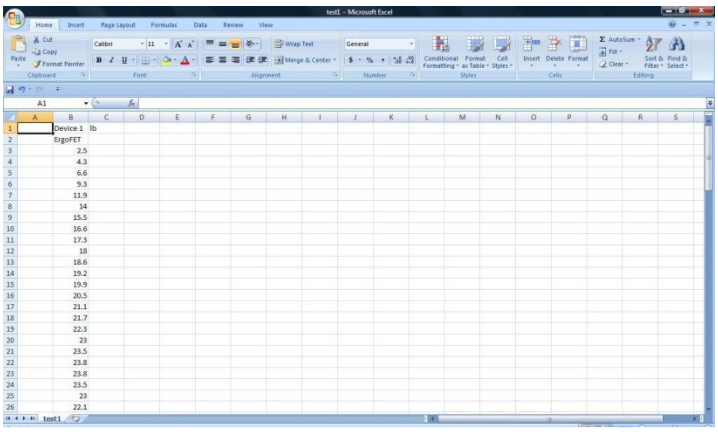
8. Main software screen will show Three Test Trial Selection after click Start Gauge button.



View Saved .csv Test File in Spreadsheet Program

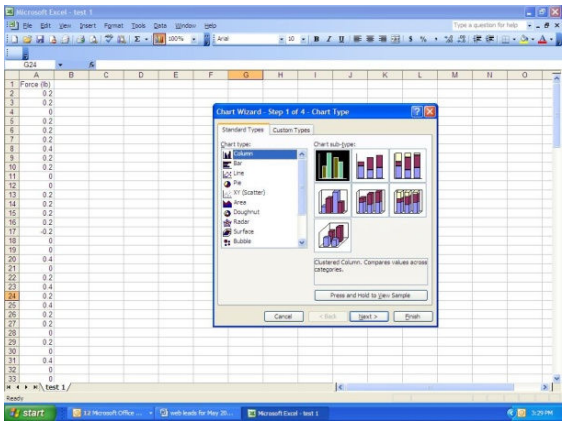
Note: Microsoft Excel spreadsheet program used in following example for displaying saved test data.

1. Click on saved .csv test file to open and view sample points collected from saved test.

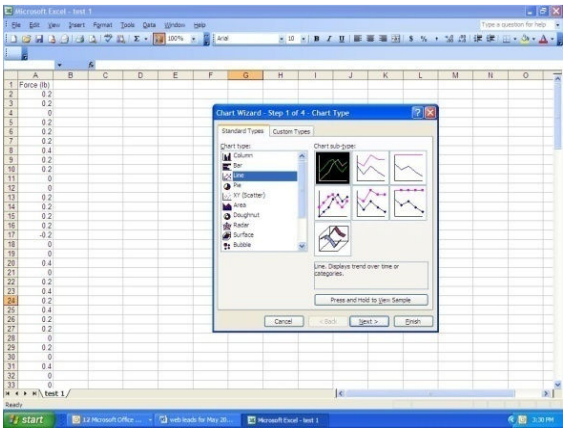


2. The test data will appear in an Excel spreadsheet. The top of the spreadsheet displays device used and unit of measure. In the column underneath the device used for test, is the sample points collected during the test.

3. View Tests in Excel Chart or Graph: Click on the Excel chart wizard icon button located in the Toolbar and displays Select Chart Type dialog box.



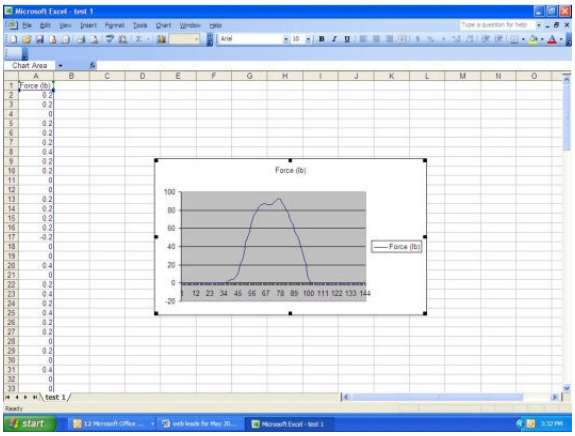
4. Select chart type, then click Next. (For demonstration purposes in this manual, a line chart type highlighted in diagram below was selected).



5. Click Finish if you want Excel to finish and generate a graph for viewing.

Option: If you wish to set any parameters for the graph, click Next. A Chart Source Data dialog box appears. Set the data range to view and select series to graph. Follow the additional steps to complete the graph. For additional information or instruction on how to make changes in the Chart Source Data dialog box, refer to your Microsoft Excel software user manual.

6. Below is the generated graph of the test data collected for the test selected.



For additional information or instructions on how to change values of the graph, format the axes or advanced formatting of graphs, refer to your Microsoft Office Excel software instructions.

If you encounter an error message or cannot get the gauge to communicate with the clinical software, please contact Technical Support and Customer Service at Phone: 800-678-7888 / 801-572-6500, or by e-mail at contact@hogganhealth.net.

SOFTWARE SUPPORT INFORMATION

For technical support and questions on software and hardware, please contact 800-678-7888/ 801-572-6500, or contact@hogganhealth.net.

CONTACT INFORMATION

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