Tablet Oscilloscope Operating Guide

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Tablet Oscilloscope Important Safety Information

You must understand all of the safety statements in this manual prior to operating the Tablet Oscilloscope.

⚠WARNING

The WARNING designation indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

⚠WARNING

The Tablet Oscilloscope is designed and factory preset to be used in conjunction with the BPK Probe™.

The BPK Probe™ is designed to be in direct contact with rotating motor shafts. Rotating motion can be dangerous; even smooth, slowly rotating shafts can grip clothing, and mere skin contact can force an arm or hand into a dangerous position. Injuries due to contact with rotating parts can be severe.

All power sources for machines are potential sources of danger. When using electrically powered or controlled machines, the equipment as well as the electrical system itself must be properly grounded. High pressure systems, too, need careful inspection and maintenance to prevent possible failure from pulsation, vibration, or leaks. Such a failure could cause, among other things, explosions or flying objects.

While never a substitute for appropriate machine guards, personal protective equipment must always be worn around rotating motor shafts. It is important to note that protective clothing and equipment can create hazards. For example, a protective glove can become caught between rotating parts, or a respirator facepiece can hinder the wearer's vision.

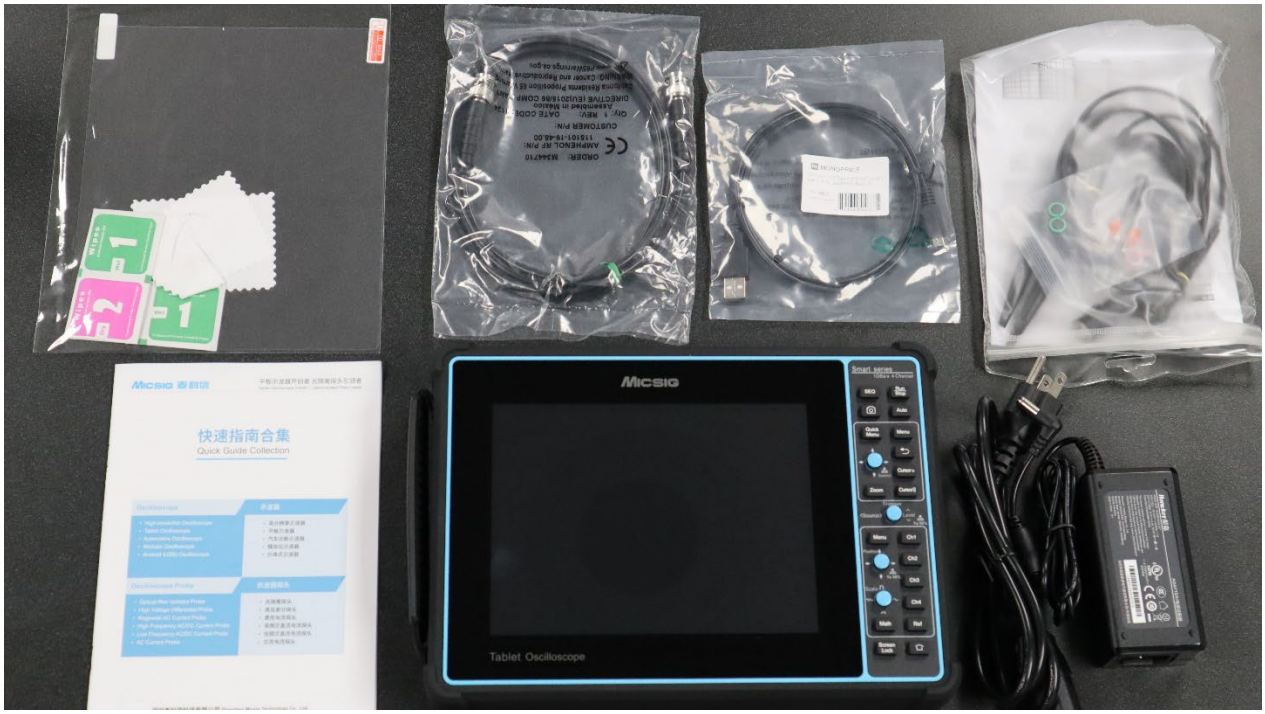
Follow all safety precautions when working with rotating equipment.

Purpose of the Tablet Oscilloscope

- The Tablet Oscilloscope allows a user to graphically view and record voltage and related data on a motor's shaft as measured with the BPK-Probe™.
- The instructions that follow explain how to use the Tablet Oscilloscope in conjunction with the Helwig Carbon BPK-Probe™.
- The Tablet Oscilloscope is preset for optimal operation with the BPK-Probe™. Helwig Carbon does not recommend adjusting its settings. If adjusted there is an option to reset to Factory Default Settings at the end of this Operating Guide.
- For additional assistance, please reference the Guide ICON located on the Tablet Oscilloscope's Home screen.

Components (included in BPK-Probe™ case)

- Tablet Oscilloscope and Charger
- BNC and USB Cables
- 2 Standard Oscilloscope Probes
- User Guide
- Screen Protector



Note: The Tablet Oscilloscope is shipped partially charged. If the scope will not initially power up or if a recharge is needed, connect the Charger/Power Cable to a 115vac/15amp, 60Hz source. Connect the Charge Cable from the charger to the oscilloscope. For quick reference a battery status indicator is displayed in the lower right corner of the screen.

Tablet Oscilloscope Instructions for Use with the BPK-Probe™

Step 1: Basic Operation

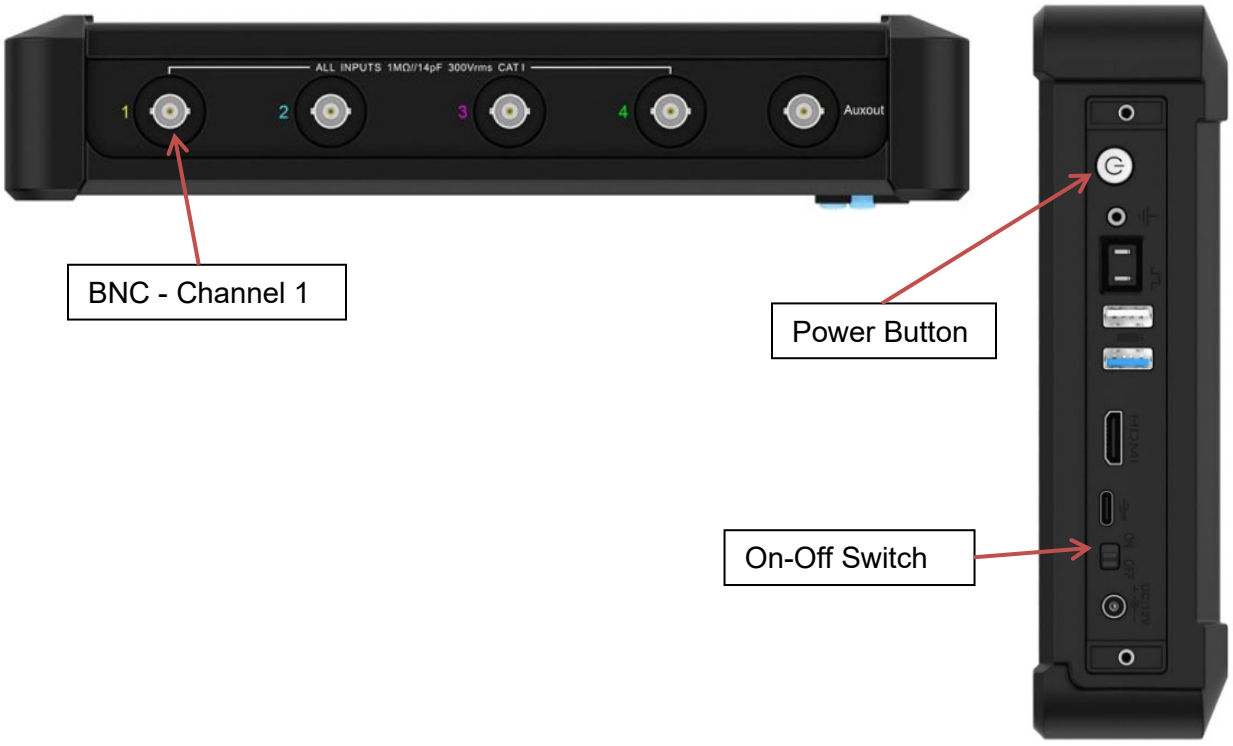
WARNING

Follow all safety precautions when working with rotating equipment.

a. To turn the Oscilloscope on, move the on-off switch to on and the press the Power button located on the right side of the tablet. To turn off the Oscilloscope press the Power button on the upper-right side of the tablet. A screen will pop up. Select the shutdown icon.

b. Allow the Oscilloscope to go through the boot up screens. The scope starts up in an optimized preset mode with all settings ready for testing with the BPK-Probe™. **This mode can be accessed at any time by clicking on the home button on the lower right corner of the Oscilloscope and then clicking on the "Oscilloscope" icon in the center of the screen.**

c. Attach the BNC cable from the BPK-Probe™ to CH1 Input on the Oscilloscope. When the BPK-Probe™ is testing a motor shaft, the detected shaft voltage will be displayed on the screen.



Step 2: Make Basic Adjustments to the Oscilloscope Settings

WARNING

Follow all safety precautions when working with rotating equipment.

The Oscilloscope settings are preset to demonstrate the BPK-Probe™ under normal operating conditions. Sometimes amplitude adjustments must be made for small or large signals. Other times, the time base may need adjustment to display very fast signals.

To make these adjustments, complete each of the following steps from the oscilloscope screen.

a. To adjust signal Amplitude, press the on-screen button above or below the voltage value in the upper right of the screen or move the light blue scale lever up or down.

b. To adjust the Time Base, press the on-screen button to the left or right of the time value in the bottom center of the screen or move the light blue scale lever left or right.

Step 3: Lock the Oscilloscope Touchscreen

The Oscilloscope touchscreen can be locked to prevent users from accidently making changes to the setup. The oscilloscope will otherwise perform and demonstrate normally when in locked mode. Instructions for resetting to Helwig Factory Defaults are outlined below.

a. To lock the screen, tap the Power Switch on the upper-right side of the tablet.

b. A screen will appear. Tap the Lock icon. The display will go back to the Oscilloscope screen and a lock symbol will appear in the upper right corner. The scope is now locked.

c. To unlock the screen, tap the Power Switch, then tap the Unlock icon. The display will go back to the Oscilloscope screen and the lock symbol will disappear from the upper right corner. The scope is now unlocked.

d. Note: The locking feature is reset each time the Oscilloscope is powered on. If you use the screen lock feature, you must relock the screen each time the Oscilloscope is powered on.

Tablet Oscilloscope Optional Settings

1. To Capture and Save a File on the Oscilloscope

a. To capture and save a screenshot, tap the Run/Stop button on the upper right-hand corner of the screen. This will turn the Run/Stop button red and freeze the image on the screen. Pressing the Run/Stop button again will turn the button green and return the scope to live real-time measurements.

b. Tap the Camera icon button to capture the image. A brief message will appear showing the image has been saved. To name/recall saved files select the Home button in the lower right to open the Home screen, then select the Files folder. Tap the three horizontal line symbol. Then select STO1004_STO1004, then “Pictures” folder, then “Screenshots”

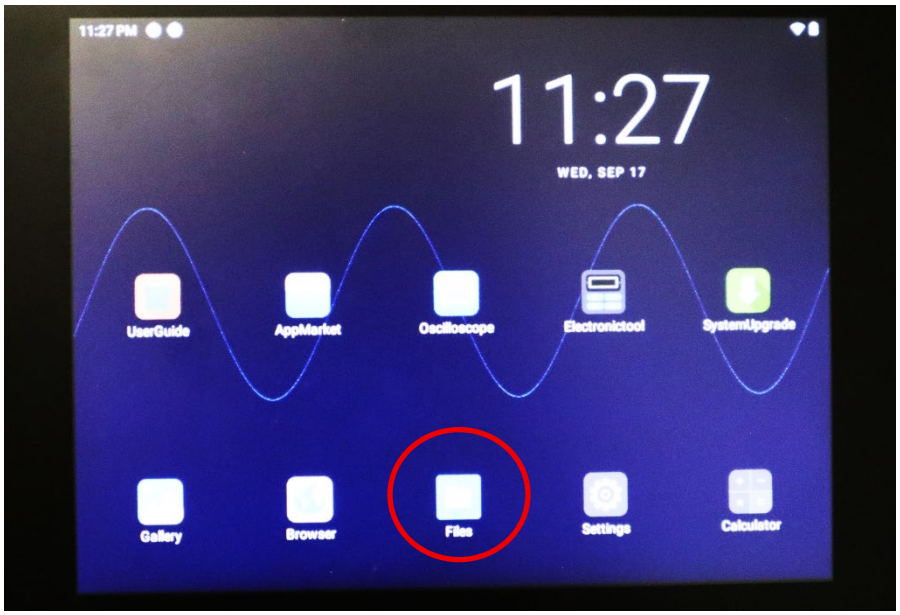
2. To Name and Recall a Saved File on the Oscilloscope

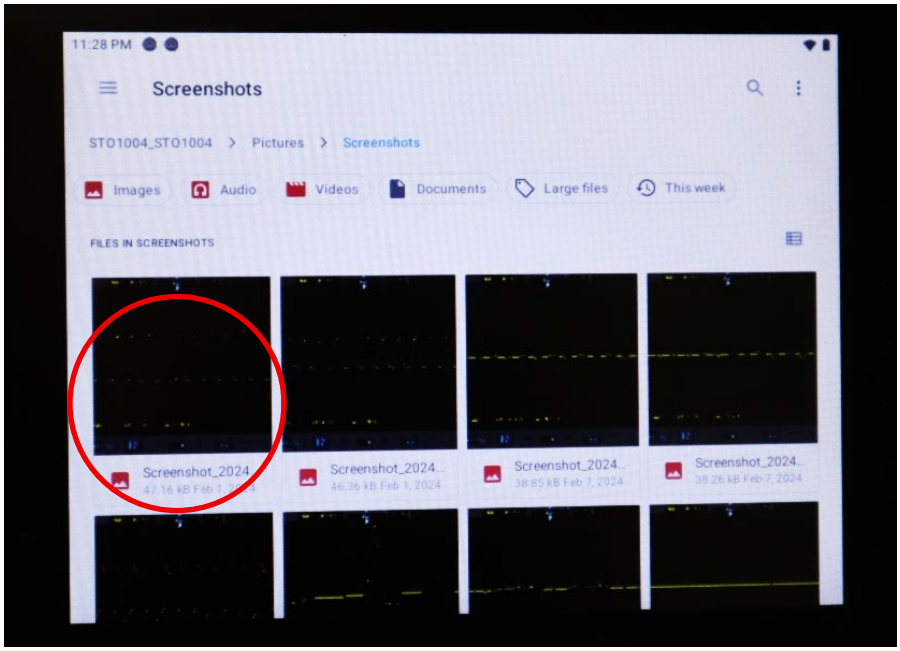
a. From the Home screen menu, tap the Files folder. Tap the three horizontal line symbol. Then select STO1004_STO1004, then “Pictures” folder, then “Screenshots”

b. Select the file you want to rename by holding your finger on the image until a check mark appears

c. Tap the three vertical dots in the upper right of the screen. Select “Rename”. A keyboard will appear to rename the file. Press okay after renaming the file.

d. To view named/saved files repeat step a and then tap on the file and a full screen image will appear. To go back to the list of images press the home button and then the file folder.





3. Saving and Transferring Oscilloscope Files

Stored images/video can be saved to a USB memory stick or downloaded directly to a PC from the oscilloscope.

To save files to a memory stick.

a. From the oscilloscope Home screen tap the Files folder, Tap the three horizontal line symbol. Then select STO1004_STO1004, then “Pictures” folder, then “Screenshots”
b. Insert the USB memory stick in the top USB port.
c. Select the file you want to save by holding your finger on the image until a check mark appears.
d. Tap the three vertical dots in the upper right of the screen. Select “Move to …”. Select the three horizontal bars icon in the upper left. Select the USB drive.
e. Select “MOVE”

To save/view files to a PC

a. Connect the scope to a PC using a Mini-USB to USB cable.
b. On the PC, open file explorer and STO1004 will show up in the This PC list.
c. Open the files in the folder and drag them to a location on the PC.

4. Reset oscilloscope to Helwig's Default Settings for Ideal Operation with the BPK-Probe

Follow these steps to reset the oscilloscope back to Helwig Factory Default settings.

Follow these steps in this order.

a. From the Oscilloscope page, swipe down from the top of the screen.

b. Select "Save", then "Setting". A new screen will open.

c. Alongside the Helwig option, tap Recovery. The unit will reset to Helwig Factory Default settings and return to the Oscilloscope screen.

Questions? **Contact us: carboncrew@helwigcarbon.com or 1-800-962-4851**