Tablet Oscilloscope Operating Guide

Helwig Carbon Products, Inc.
8900 W. Tower Ave.
Milwaukee, WI 53224
www.helwigcarbon.com
carboncrew@helwigcarbon.com
1-800-962-4851
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 (Optional)

- The Tablet Oscilloscope allows a user to graphically view and record peak-to-peak 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 Help Guide located on the Tablet Oscilloscope’s home screen.

Components (included in BPK-Probe™ case)

- Tablet Oscilloscope
- Charger and Charging Cable
- BNC Cable

Note: The Tablet Oscilloscope is shipped fully charged. If the scope will not initially power up or if a recharge is needed, please connect the Charger Power Cable to a 115vac/15amp, 60Hz source. Connect the Charge Cable from the charger to the oscilloscope, see page 4. For quick reference a battery status indicator is in the lower right corner of the tablet screen.
Tablet Oscilloscope Instructions for Use with the BPK-Probe™

Step 1: Turn on the Tablet Oscilloscope

WARNING

Follow all safety precautions when working with rotating equipment.

A. To turn the Oscilloscope on, press the power switch located on the right side of the tablet.

B. Allow the Oscilloscope to go through its diagnostic routine. When complete, it will display the grid and basic setting information. The scope starts up in an optimized preset mode with all settings ready for testing with the BPK-Probe™.

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. Ensure both BPK-Probe sensor tip brushes are firmly and squarely against the contact surface.

A. To adjust the Amplitude of the signal, select the V or mV to increase or decrease the signal height.

B. To adjust the Time Base, tap the large or small ~ to expand or reduce the number of pulses on the screen.
Step 3: Lock the Oscilloscope Screen

When the adjustments are set, the Oscilloscope 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.

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. 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.

E. To turn off the Oscilloscope, press the power switch on the upper-right side of the tablet. A screen will pop up. Select the shutdown icon.

F. Please see the next section, Tablet Oscilloscope Optional Settings, for more advanced features.

Tablet Oscilloscope Optional Settings

1. To Capture and Save a File

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.

B. Swipe your finger up from below the screen and a menu will open at the bottom of the display. Tap the camera icon to capture the image. A brief message will appear showing the image has been saved. To name/recall the saved file, select the home icon on the lower right of the screen to open the home screen.
2. To Name and Recall a Saved File

A. From the home screen menu, save a file by tapping the files icon. Saved images will appear.

B. Select the file you want to save/rename by tapping the grey box in the upper left corner of the file image.

C. When selected, the grey box will be highlighted, and new icons will appear on the right side of the screen.

D. Tap the rename icon. A keypad will appear and you can name the file.

E. Select Enter to save the newly named file.

F. Tap the home icon on the lower right corner of the screen to return to the home screen menu.

G. To view named/saved files select the photos icon from the home screen menu, the named/saved files will appear. Tap the image/file you want to view. To exit, select the home icon.

H. To turn off the Oscilloscope, press the power switch on the upper-right side of the tablet. A screen will pop up. Select the shutdown icon.
3. How to Revert to Helwig’s Default Oscilloscope Settings for Ideal Operation with the BPK-Probe

Following these steps resets the Oscilloscope to the Helwig factory default settings and places the tablet back to the oscilloscope screen, ready for the next test.

A. From the Oscilloscope page, swipe down from the upper left corner (above the word HELWIG) to reveal a drop-down screen.

B. Tap the Userset tab. A new screen will appear.

C. Tap the Save Recovery tab. A drop-down screen will appear.

D. Alongside the Helwig option, tap the Recovery option. The unit will return to the Oscilloscope screen with the Helwig default settings.