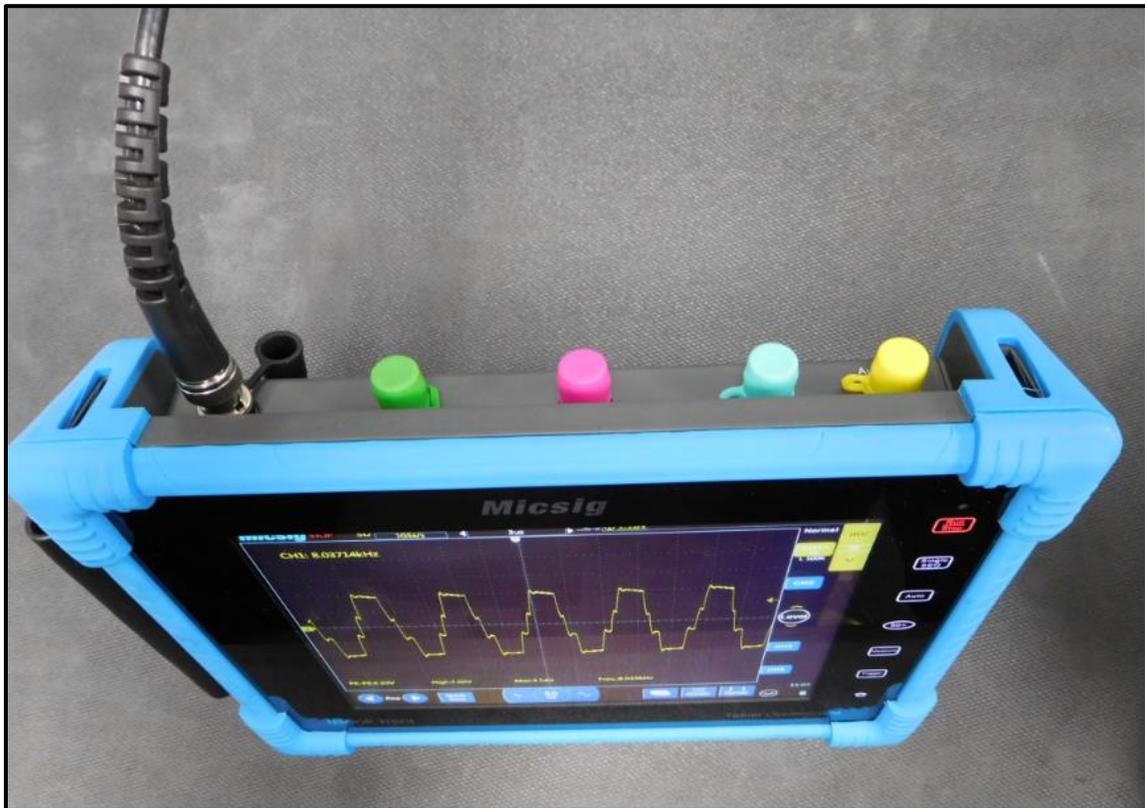




Tablet Oscilloscope Operating Guide



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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
- USB Memory Stick
- Micro SD Card Reader
- USB to Mini-USB Cable Adaptor



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.

- To turn the Oscilloscope on, press the Power Switch located on the right side of the tablet. 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.
- 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™.
- 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

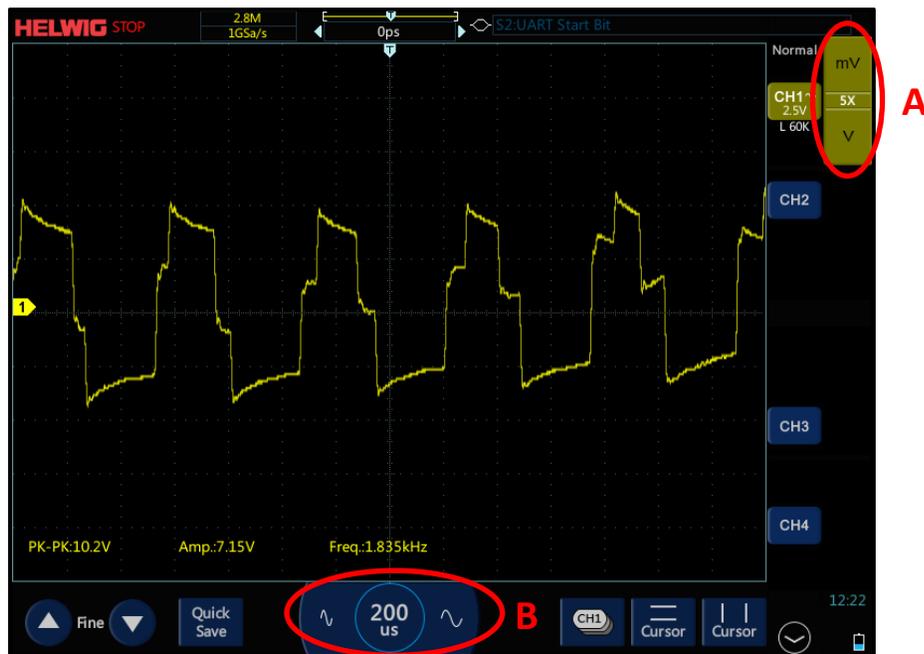
!WARNING

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.

- To adjust signal Amplitude, select the V or mV to increase or decrease the signal height.
- 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 Touchscreen

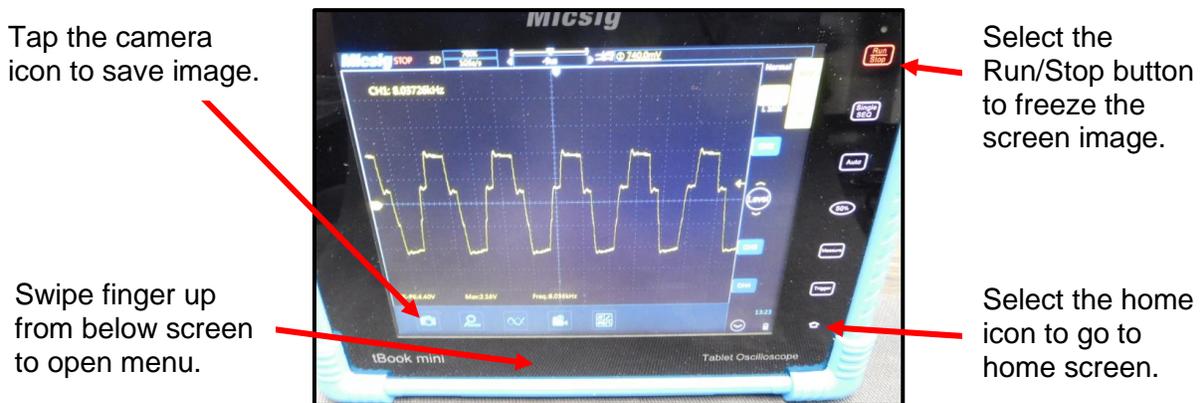
The Oscilloscope touchscreen can be locked to prevent users from accidentally making changes to the setup. The oscilloscope will otherwise perform and demonstrate normally when in locked mode. Instructions for resetting to Helwig Factory Defaults are outlined below.

- 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.



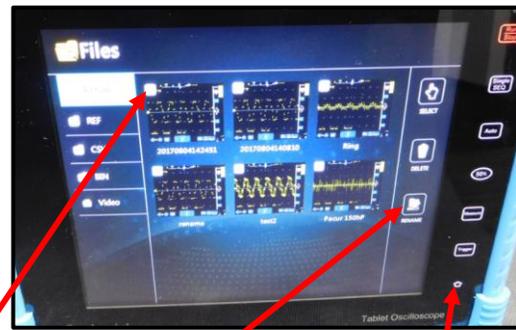
- b. Swipe your finger up from below the grid screen and a menu will open at the bottom of the display. Tap the Camera icon to capture the image. A brief message will appear showing the image has been saved. To name/recall saved files select the Home icon on the lower right of the screen to open the Home screen, then select the Files folder.

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

- a. From the Home screen menu, tap the Files folder. 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, name the file and press Enter to save the newly named file. When saved the file will automatically be stored in the Photos folder located on the Home screen.
- e. Tap the Home icon on the lower right of the screen to return to the Home screen menu.



Select the Files folder to rename or export a saved file.



To select a file, tap box in upper left corner.

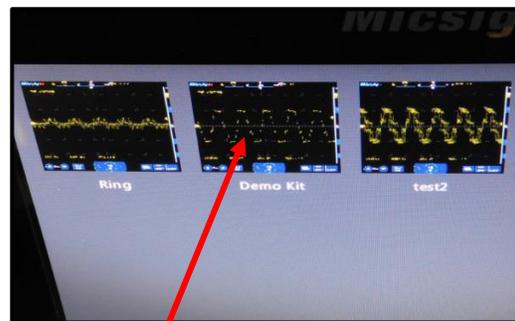
Rename icon

Home Screen icon

- f. To view named/saved files select the Photos icon from the Home screen menu. The named/saved files screen will open. For a more detail view tap an image to open a full screen view. To exit select the Home icon.



Select the Photos icon to view named/saved files



Tap an image to enlarge for a more detailed view

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.

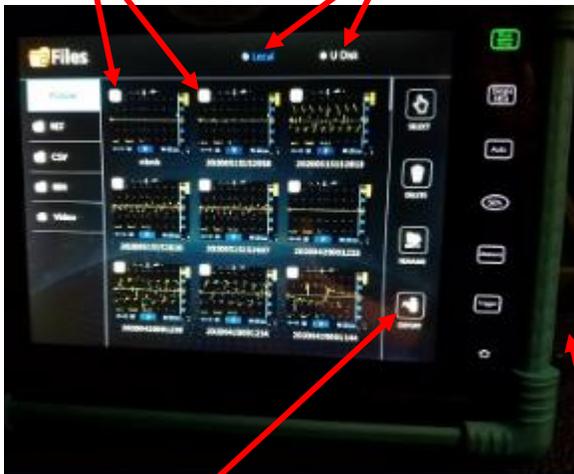
To save files to a memory stick.

- a. From the oscilloscope Home screen tap the Files folder, saved images will show.
- b. Open the flap on the right side of the scope and insert the USB memory stick. Note that two options appear in the upper right of the screen – Local (highlighted) and U Disk.
- c. Select the image(s) to transfer by tapping the Grey Box in the upper left corner of each image you want transferred. A checkmark will highlight each selected image. Note: When a file is selected an Export option will appear on the lower right corner of the screen.
- d. With the captured files selected tap the Export icon to transfer the files to the USB stick.
- e. To view files saved on the memory stick repeat steps A and B then tap the U Disk option. Images saved on the memory stick will appear.

Select images to transfer by tapping Grey Box on each file

Local (highlighted) and U Disk options appear

From the Files menu and with the USB stick installed select the U Disk option to view files saved on the memory stick



Select the Export icon to transfer files to the USB stick

Install USB on right side of the scope



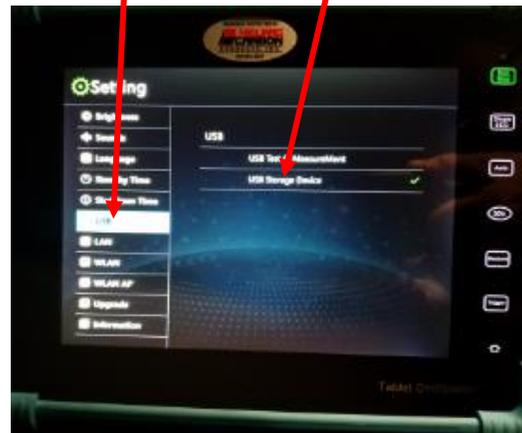
To save/view files to a PC

- Connect the scope to a PC using a USB to Mini-USB cable.
- From the scope Home screen select the Settings icon. A new screen will open.
- Select the USB option from the dropdown list on the left side of the screen.
- Select USB Storage Device option on the right, a checkmark will note the selection.

From the Home screen select the Settings icon



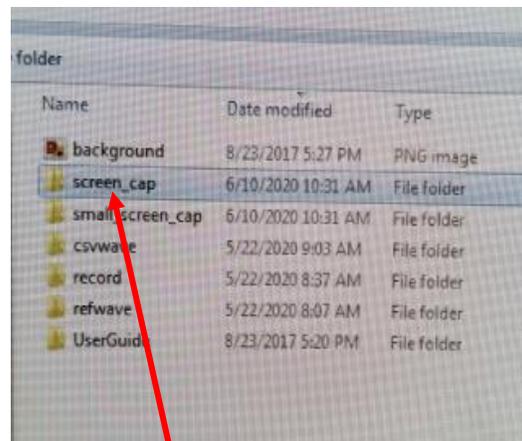
Select USB then USB Storage Device



- A pop-up will appear on your PC – “Open folder to view files”, select it.
- A list of folders will open, select the Screen_Cap folder to view/download files.



When connected click here to open folder



Click on Screen_Cap to open saved files

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, tap the Trigger option. A dropdown will appear.
- B. Tap the Userset tab. A new dropdown will appear.
- C. Tap the Save Recovery tab. A new screen will open.
- D. Alongside the Helwig option, tap Recovery. The unit will reset to Helwig Factory Default settings and return to the Oscilloscope screen.

