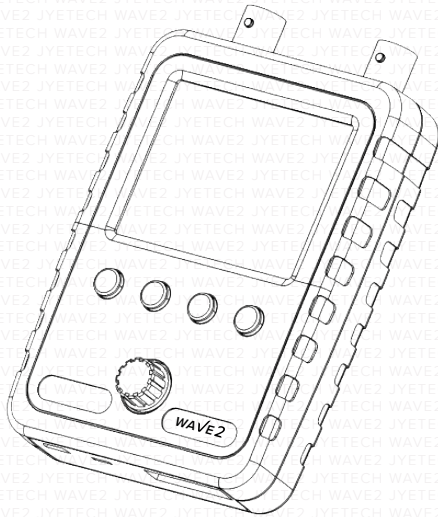
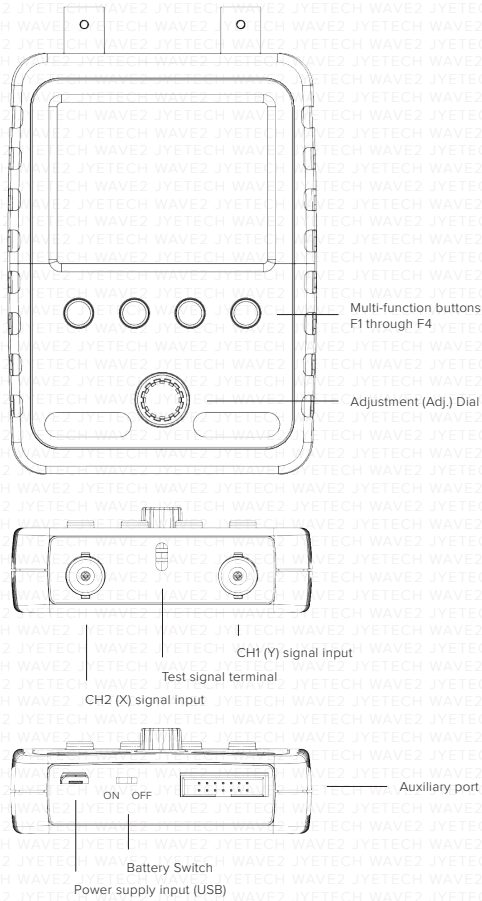


# QUICK START GUIDE (REV. 2)

## WAVE2 OSCILLOSCOPE



### CONTROL



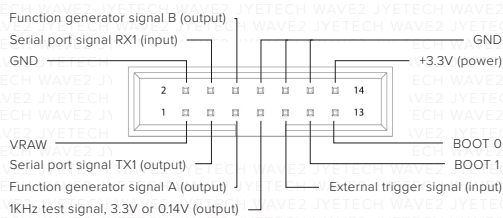
### POWER ON / OFF

- To Power ON Press the Adjustment Dial.
- To Power OFF Press and Hold the Adj. Dial for 2 seconds, or press the Adj. Dial to bring up Menu and select "PWR OFF".

### BATTERY SWITCH

When battery is installed, set the battery switch to ON position. Toggle between OFF and ON positions to hard-reset the WAVE2 when battery powered.

### AUXILIARY PORT PINOUT

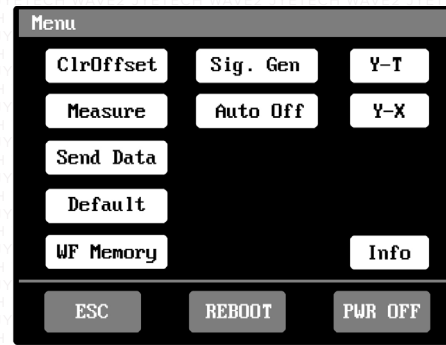


FIRMWARE 113-15801-045 OR LATER

### WHAT'S INCLUDED

- WAVE2 Dual Channel Oscilloscope
- BNC Probes (x2)
- USB Power Cable
- Quick Start Guide
- Assembly Guide (included with 15801K only)

### MAIN MENU

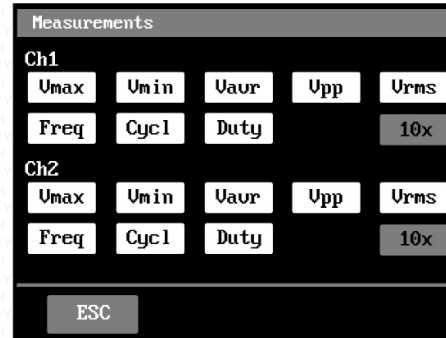


Press the Adj. Dial at any time to enter the main menu.

<b>ClrOffset</b>	Align Vertical Position (VPos) indicators to OV	<b>F1</b> Previous
<b>Measure</b>	Enter measurement selection menu	<b>F2</b> Next
<b>Send Data*</b>	Send captured data via serial port	<b>F3</b> Not assigned
<b>Default</b>	Restore factory default settings	<b>F4</b> Select
<b>WF Memory</b>	Enter waveform save/recall menu	
<b>Sig. Gen</b>	Enter Signal Generator mode	
<b>Auto Off</b>	Enter Auto Power-Off menu	
<b>Y-T</b>	Enter Y-T plotting mode	Prev/Next
<b>Y-X</b>	Enter Y-X plotting mode	
<b>Info</b>	Display WAVE2 firmware details	Select
<b>ESC</b>	Exit Menu	
<b>REBOOT</b>	Reboot	
<b>PWR OFF</b>	Power off	

\*COM Port Settings: Data Bits: 8, Parity: None, Stop Bits: 1, Baud Rate: 115200 bps

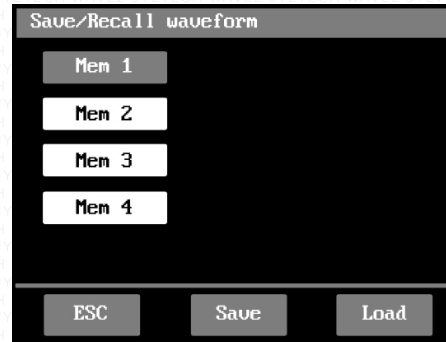
### MEASUREMENTS



Select the waveform parameters to be displayed on screen.

<b>Vmax</b>	Maximum voltage of signal	<b>F1</b> Previous
<b>Vmin</b>	Minimum voltage of signal	<b>F2</b> Next
<b>Vavr</b>	Average voltage of signal	<b>F3</b> Not assigned
<b>Vpp</b>	Peak-to-Peak voltage of signal	<b>F4</b> Select
<b>Vrms</b>	Root-Mean-Squared (RMS) voltage of signal	
<b>Freq</b>	Most prominent Frequency of signal	
<b>Cycl</b>	Most prominent Wavelength of signal	Prev/Next
<b>Duty</b>	Most prominent Duty Cycle of signal	
<b>10x</b>	Select to auto-correct signal when 10x probe is used	Select
<b>ESC</b>	Return to main menu	

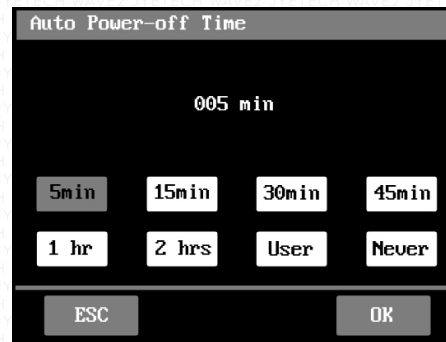
### WAVEFORM MEMORY



Select the memory for waveform to be saved or loaded.

<b>Mem 1 - 4</b>	Memory blocks 1 through 4	<b>F1</b> Previous
<b>ESC</b>	Return to main menu	<b>F2</b> Next
<b>Save</b>	Save the last displayed waveform to selected memory and return to the state before entering main menu	<b>F3</b> Not assigned
<b>Load</b>	Load waveform from selected memory. The loaded waveform is displayed in HOLD state	<b>F4</b> Select
		Prev/Next
		Select

### AUTO POWER-OFF TIME (only enabled when the WAVE2 is running on battery and not connected to external power)



Select the Auto Power-Off time when the oscilloscope will turn off during periods of inactivity.

<b>User</b>	Customize auto power-off time	<b>F1</b> Previous
<b>Never</b>	Disable auto power-off	<b>F2</b> Next
<b>ESC</b>	Return to main menu without saving	<b>F3</b> Not assigned
<b>OK</b>	Confirm and exit	<b>F4</b> Select
		Prev/Next, Adjust time (User mode)
		Select

# Plotting Modes

## Y-T MODE

Scroll to adjust CH1 vertical position (1)

Scroll to adjust CH2 vertical position (2)

Scroll to adjust Trigger level (3)

Vertical Position (VPos) Indicator

CH1 settings: Sensitivity, Couple, VPos

CH2 settings: Sensitivity, Couple, VPos

Timebase

Trigger level

CH1 signal (yellow)

CH2 signal (orange)

Trigger settings: Trigger level, Trigger source, Trigger slope, Trigger mode

Test signal level (Holding down F1 to toggle between 3.3V and 0.14V)

- F1** Previous parameter
  - F2** Next parameter
  - F3** Next sub-menu parameter
  - F4** Hold/release functionality
- Adjust selected parameter
- Main menu

To adjust the Horizontal Position (HPos), either highlight the HPos indicator, or scroll horizontally on the screen until desired position.

## Y-X MODE

YPos indicator

Power Supply / Battery Indicators

HOLD state indicator

Y settings: Sensitivity, Couple, YPos

X settings: Sensitivity, Couple, XPos

Trigger level

XPos indicator

Sampling rate (sample/s)

Trigger settings: Trigger level, Trigger source, Trigger slope, Trigger mode

Callout 1: Scroll to adjust Y-axis position

Callout 2: Scroll to adjust X-axis position

- F1** Previous parameter
  - F2** Next parameter
  - F3** Next sub-menu parameter
  - F4** Hold/release functionality
- Adjust selected parameter
- Main menu

To adjust the Trigger levels when trigger sources are CH2 (X) or CH1 (Y), scroll to adjust the X-axis or Y-axis positions, respectively.

# Signal Generator Mode

Plotting Area / Parameters

Signal Parameters

**SIGNAL PARAMETERS**

<b>Freq</b>	Frequency/cycle
<b>Vpk</b>	Amplitude (peak value)
<b>Ofs</b>	Offset
<b>Duty</b>	Waveform Duty Cycle
<b>Phase</b>	Phase in Degrees
<b>WF</b>	Choose Waveform
	- Sine
	- Square
	- Sawtooth
	- Stair

**F1** Previous parameter

**F2** Next parameter

**F3** Next sub-menu parameter (when in Plotting Parameters section)  
Next signal channel parameters (when in Signal Parameter section)

**F4** Hold/release functionality

Adjust selected parameter

Main menu

When Signal Parameter is selected, HOLD **F4** + for enter Manual Step Size Entry Mode

## MANUAL ENTRY OPERATIONS (Example shown is for Frequency)

Delete / Backspace

Toggle Frequency / Cycle state

Select unit to confirm entry

Exit digital pad

## Touch Screen Calibration

- 1 Press the Dial to power up the unit, followed by "F3" when the WAVE2 splash screen appears.
- 2 During the calibration process, three white crosses will be displayed sequentially. Touch the center of each cross 8 times to calibrate the screen.
- 3 Once the calibration process is complete, a green cross will appear on the screen and it will follow any subsequent touches on the screen to test the calibration results.
- 4 Press the Dial to exit the calibration state and reboot the WAVE2 oscilloscope.