Time Electronics
Calibration, Test and Measurement

# Multifunction Calibrator Control Panel Software

## User Manual

Revision 2306-1

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To ensure correct operation and safety, please follow the instructions in the product user manual.

Time Electronics reserves the right to change the contents, specifications and other information contained in this manual without notice.

# Contents

# 1 Introduction


The Time Electronics multifunction calibrator control panel is a software application that provides an advanced user interface for series 2 models. Connect a PC or laptop to the calibrator and the application will communicate with the instrument for control, configuration, and information display and readback.

It is an intuitive control application that enables a fast method of function selecting, setting and output. Quickly adjust and deviate values in real time, and easily select function ranges and units required.

The control panel is designed to work with keyboard and mouse, or via touch screen operation. It is ideal for a bench setup performing testing work and calibration applications.

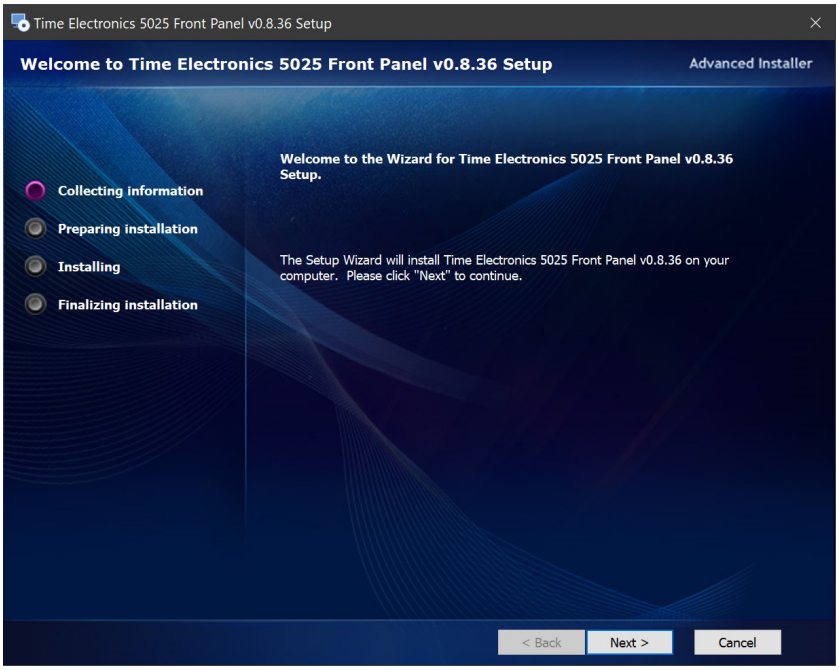
# 2 Setup

## 2.1 Operating System Requirements

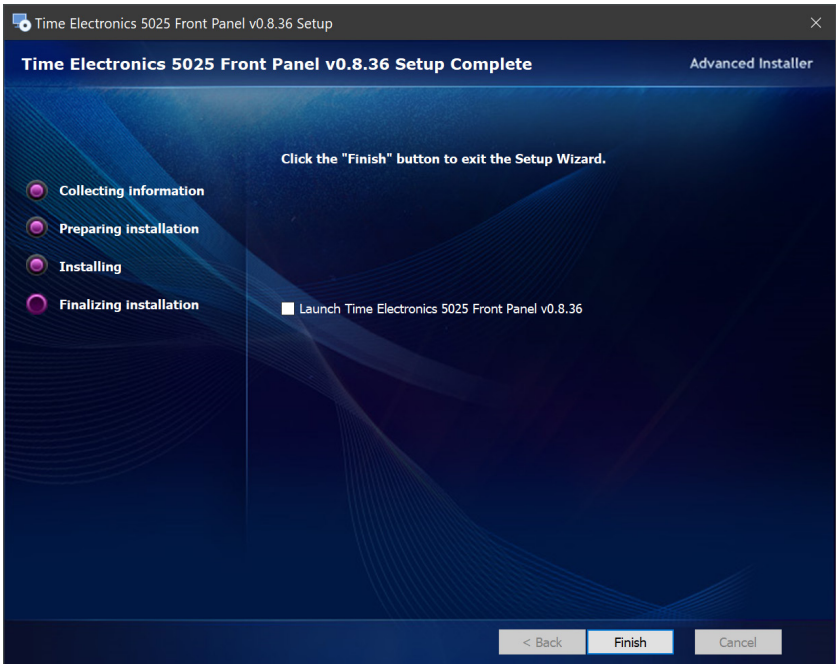
Windows 10 or 11 (64-bit only)

## 2.2 Installation

The software will be supplied on a USB stick or made available by download. Run the installer wizard and follow the steps shown:

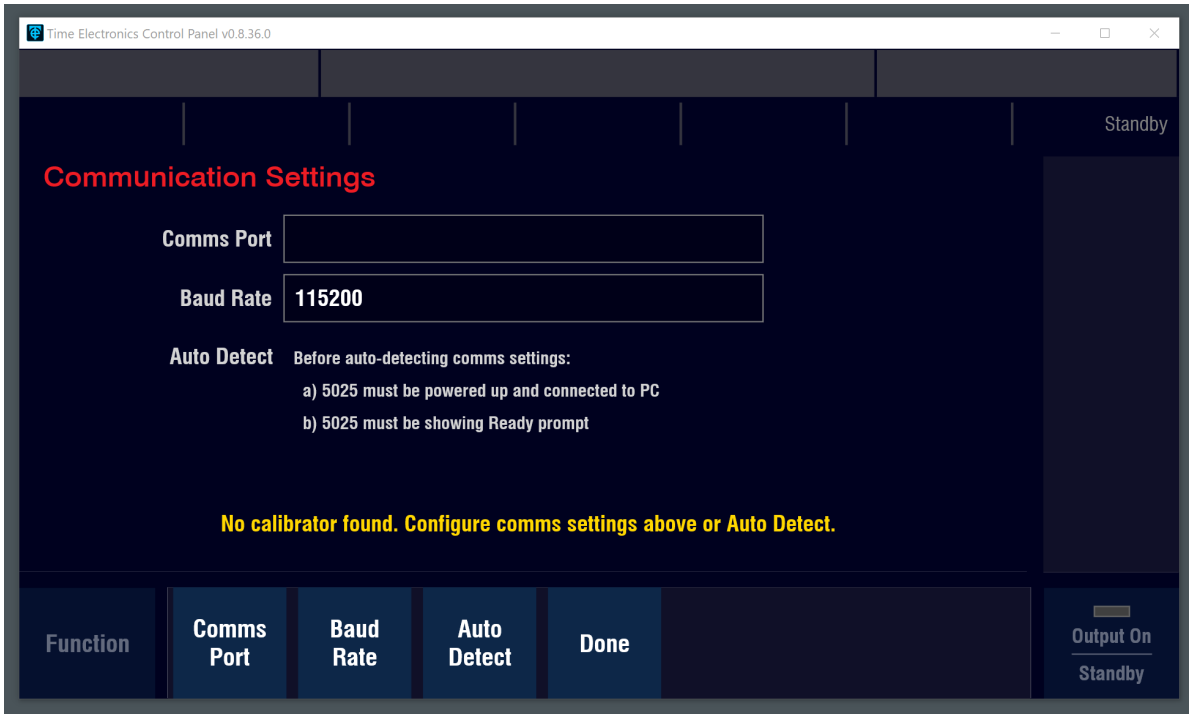



Once the install is complete, you can close and then launch the application.

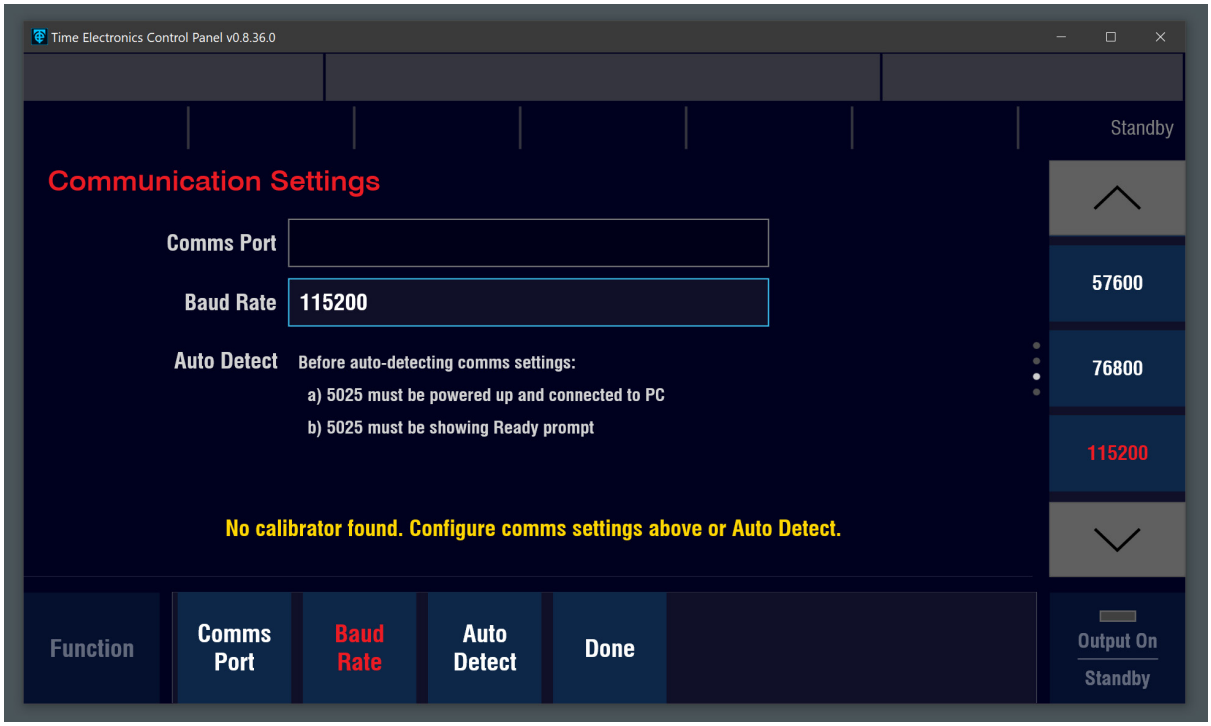


## 2.3 Communication Settings

When the application is first launched, the communication setting screen will appear:




To utilise the auto-detect setting, connect the calibrator to the computer.
You can also manually configure the communication using the buttons in the bottom of the screen. These will allow you to enter the comms port and baud rate. A side menu will show the available baud rates when the button is selected.

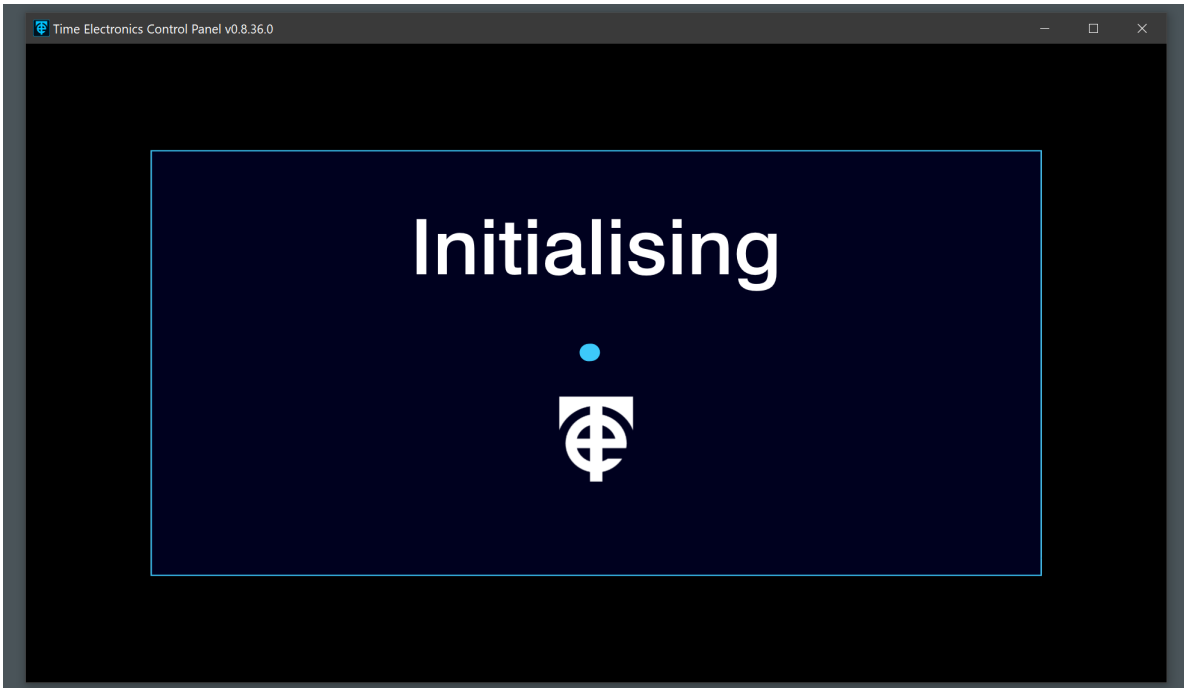



Once connection is established, you must close the application and restart.

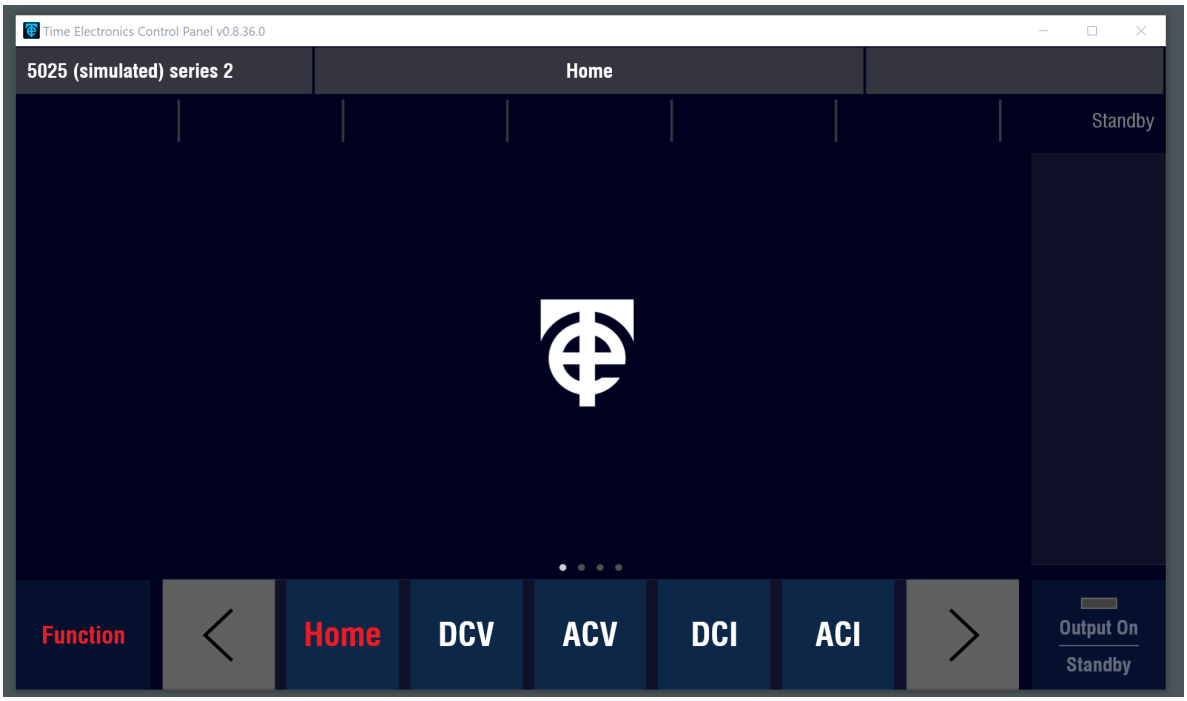
# 3 Operation

**Important Note:** This application should be used alongside the calibrator user manual and all safety warnings and guidelines in that document should be followed.

After setup the control panel application can be started. An initialising screen will briefly display as the application loads:

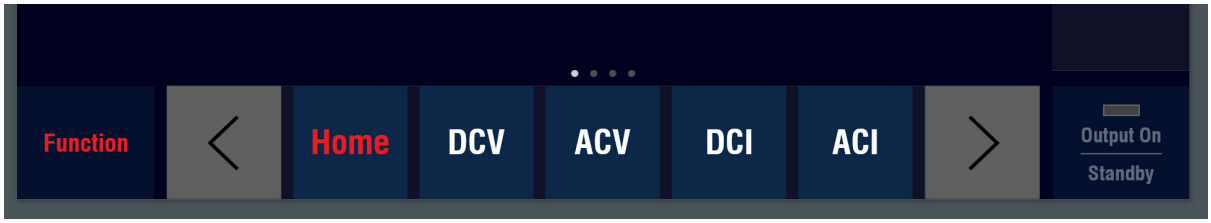



Once loaded the application home screen will display:



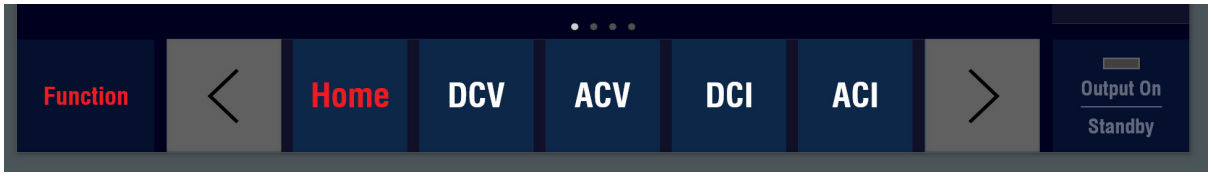
## 3.1 Functions

On the home screen, the function menu buttons are displayed in the bottom section. The buttons listed will depend on the calibrator functions. The following examples will be based on the 5025C-S2 multifunction calibrator.

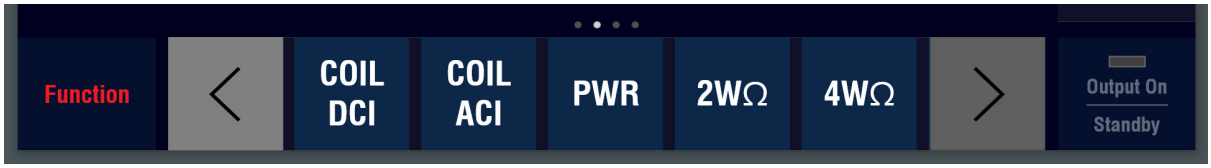



The menu has right and left arrow buttons to view the selection of functions. The dots above the menu indicate the page of the menu:

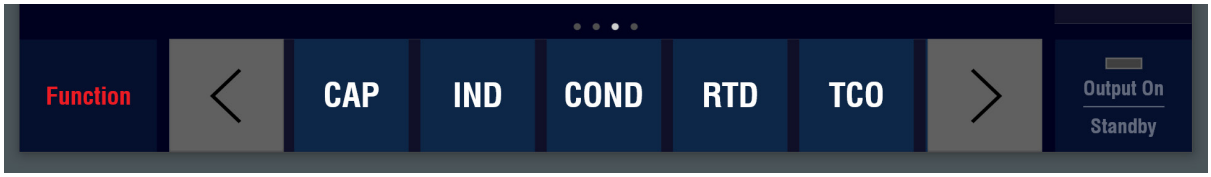
Function Menu Page 1:



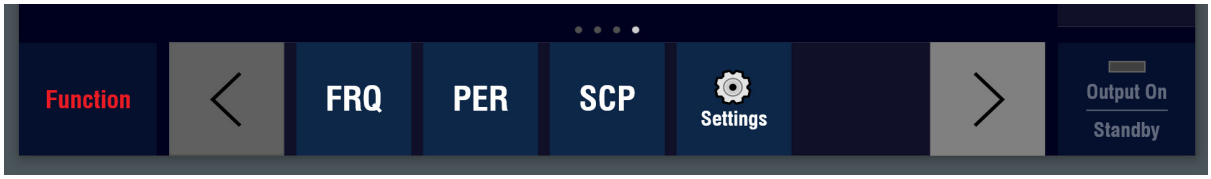

Function Menu Page 2:




Function Menu Page 3:




Function Menu Page 4:




The function buttons are active from the home screen and can be selected.

The buttons in red (Function and Home) are inactive, and are used once a function is selected to return to the home screen. The output button is also inactive at this time because no function is selected for use.

## 3.2 DC Voltage or Current **DCV | DCI**

DC Voltage and DC Current have common operation steps. Shown here is DC V.

Press the **DC V** button. The DC Voltage function screen will display:


By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

***Note:*** *DC Voltage has a selectable high drive mode that provides a higher output current to power more demanding instruments such as analogue meters or voltage detectors. This can be set in the Settings Menu – Options. See the Settings Section later in this guide for details.*

To exit the function, press the **Function** button.


The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.

### 3.2.1 Setting an Output Value

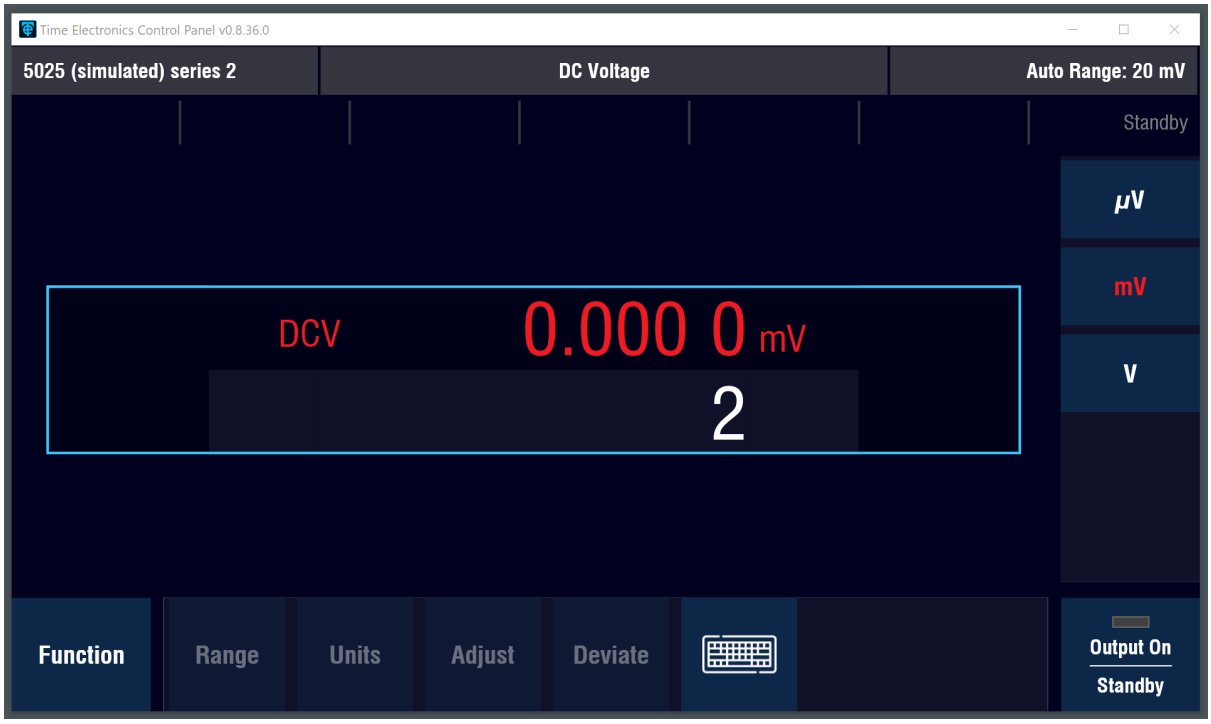
The application has convenient methods of setting the output, that can be used depending on the user preference, or if a touchscreen interface is available.

These methods are:

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

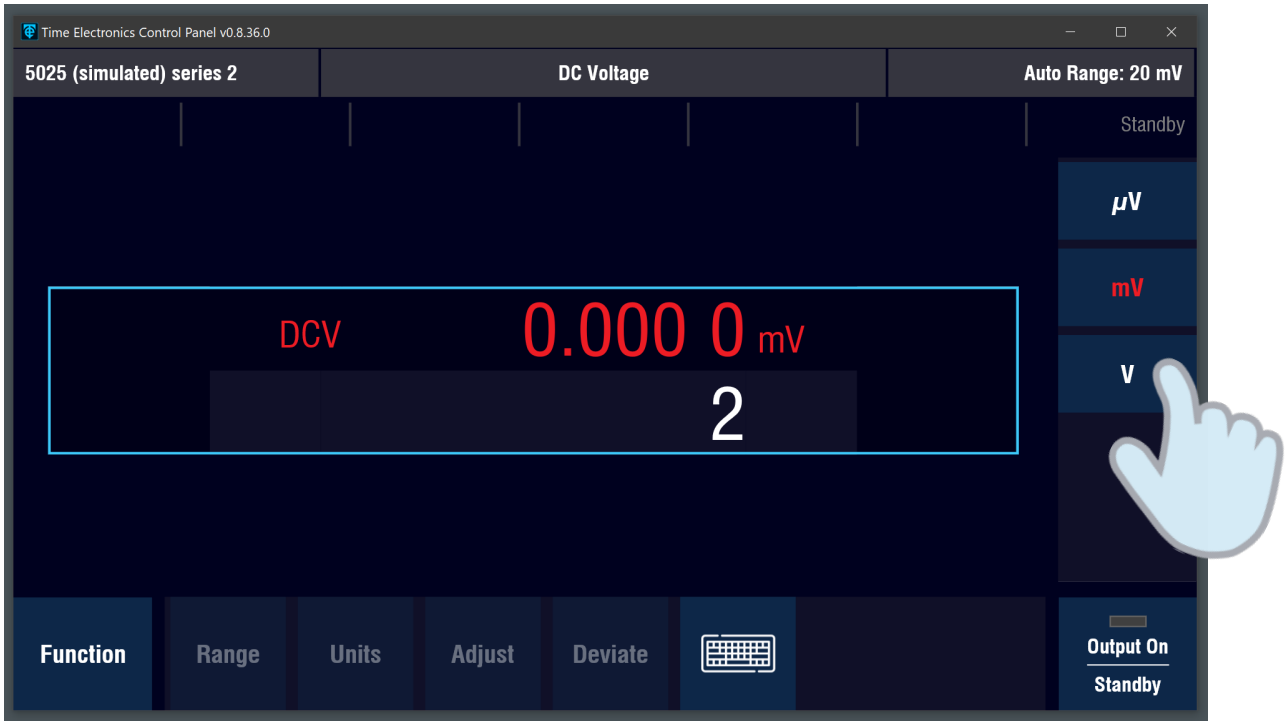
## Keyboard Entry

With the function selected, you can use your computer's keyboard (or numeric keypad) to enter a value. Once a value is entered it will display below the output display. For example, here the keyboard entry "2":




The units sidebar menu will display to provide the option to change the unit.
If you are in the correct unit, you can press "enter" on the keyboard to finalise the value.

Or you can press one of the unit buttons and the value entered + unit will be applied to the display:




The value will display, ready for output.

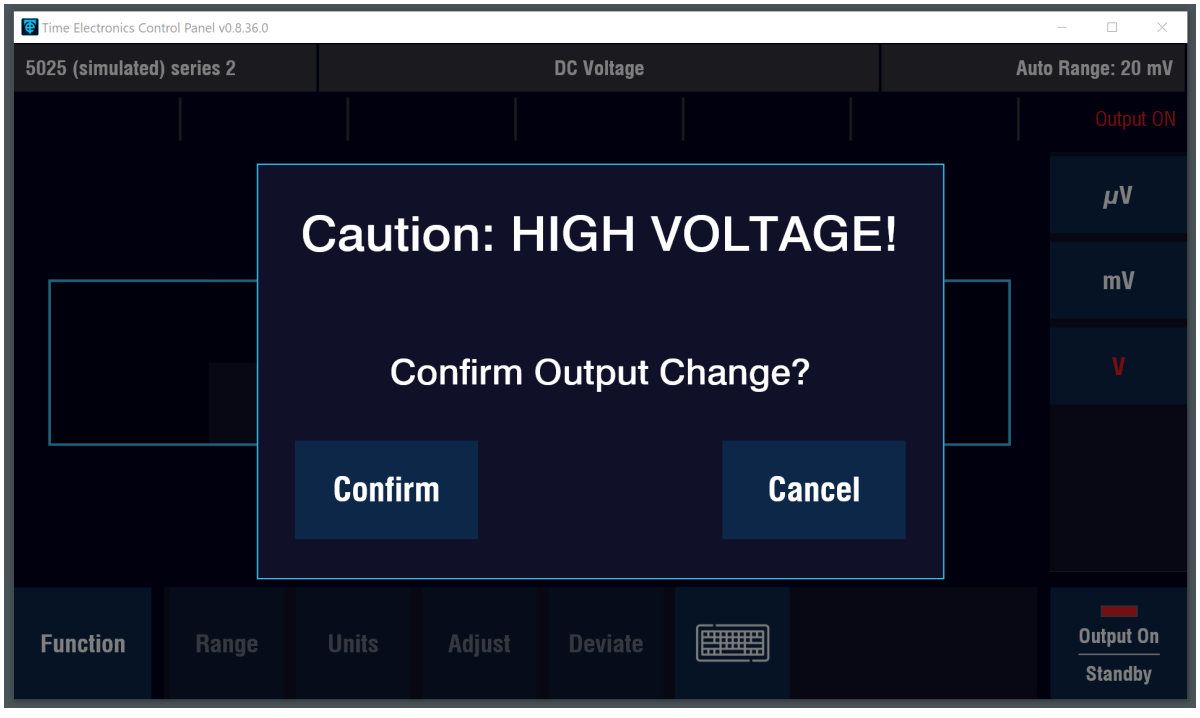

Note that the function units will default to the previously unit currently in use. So if you are entering 3 V after 2 V the unit will remain the same, for speed of operation.

To output the value, press and hold the **Output On** button for 3 seconds.

The red indicator will illuminate on the output button, and the Output On status will display:

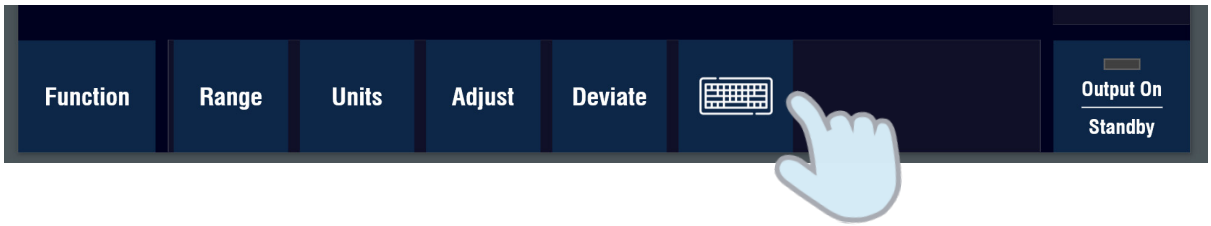

**Important Note:** Before outputting, ensure the calibrator is properly connected and the output value is suitable for the unit under test.

When the output is on, you can change the value as required and this will be applied to the calibrators terminals. If you enter a high output value, a pop-up safety screen will display to request you confirm the output.



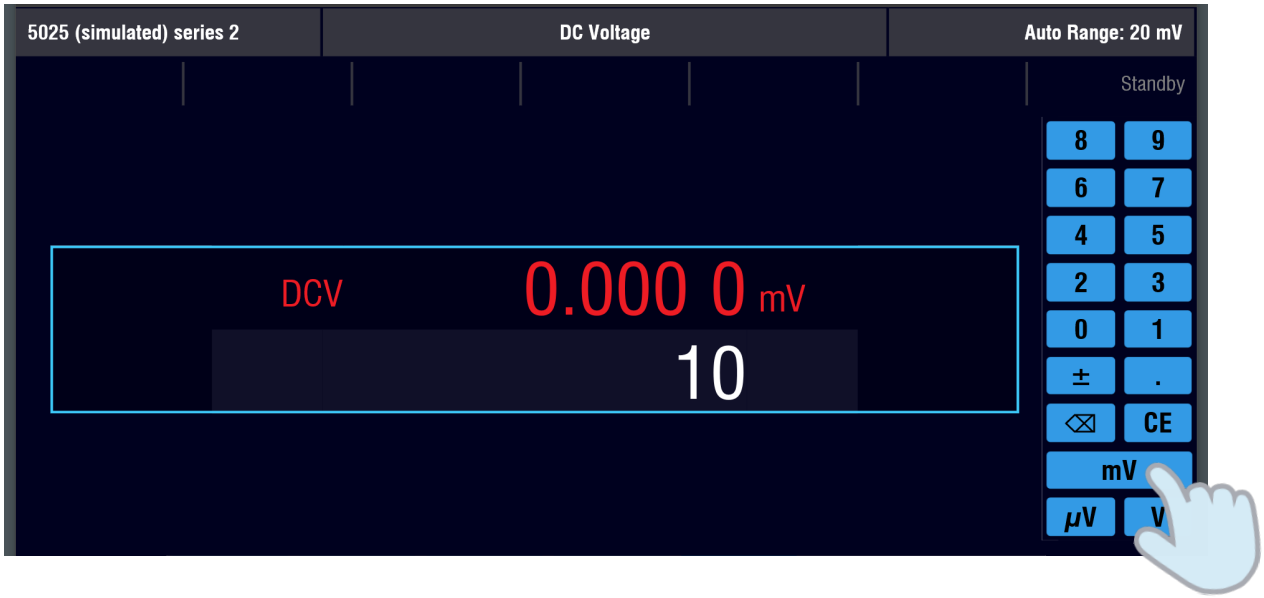
## On-screen Keyboard Entry

This method is suitable for touchscreen users With the function selected, press the Keyboard button:

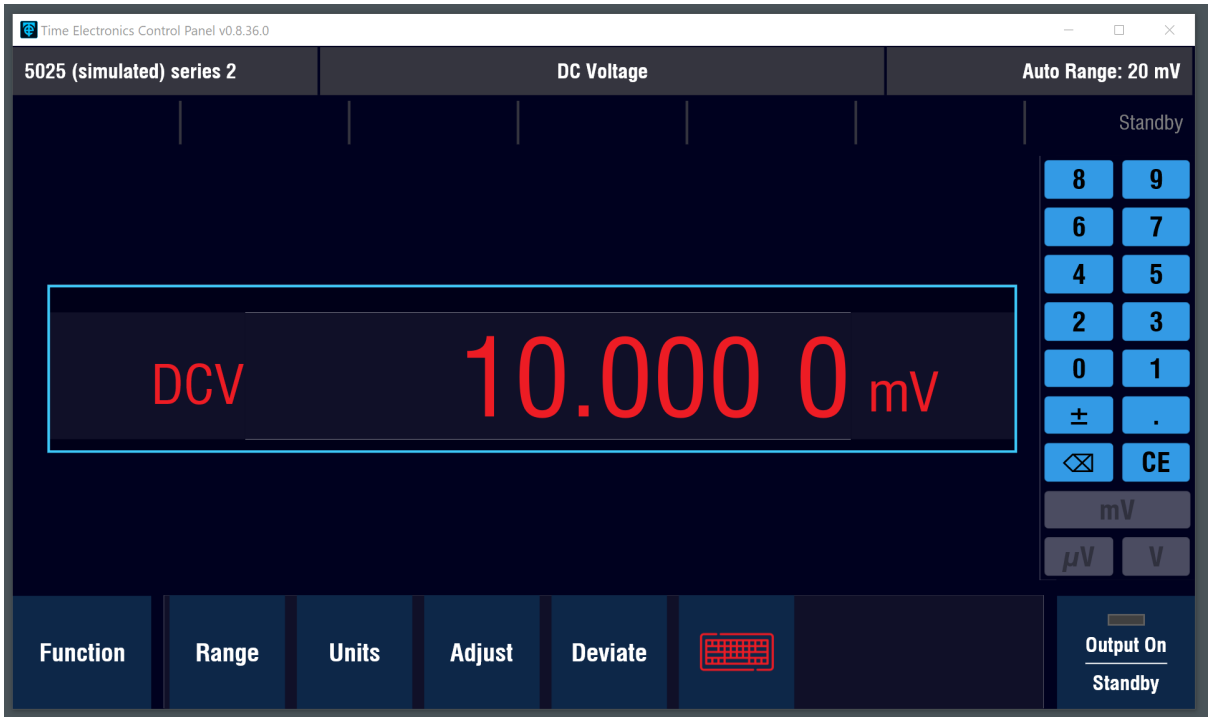



The on-screen keyboard will display on the sidebar:


You can enter the value required by pressing the number buttons, then the unit required.



The entered value will display, ready for output.




To close the on-screen keyboard, press the red keyboard button.

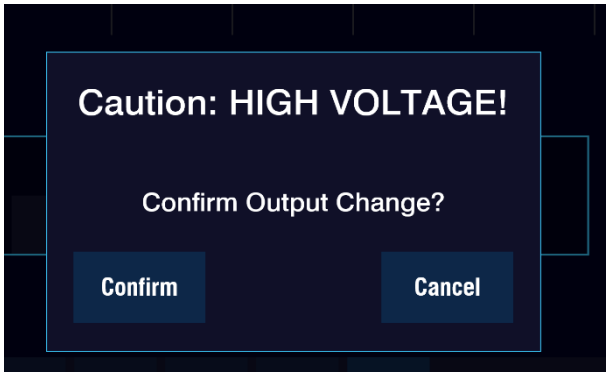
To output the value, press and hold the **Output On** button for 2 seconds.


The red indicator will illuminate on the output button, and the Output On status will display.

**Important Note:** Before outputting, ensure the calibrator is properly connected and the output value is suitable for the unit under test.

When the output is on, you can change the value as required and this will be applied to the calibrators terminals.

If you enter a high output value, a pop-up safety screen will display to request you confirm the output.



## Adjust Method

This method allows you to adjust the value incrementally. It can be used from a zero starting value or once the initial set value has been entered. You will need to be in the required units.

Press the **Adjust** button:


The adjust control buttons will display on the sidebar:


The lowest decimal point of the function and range will be highlighted. This is the finest adjustment. You can increment by using the up/down arrow buttons.

You can move the adjustment to the next decimal point using the right/left arrow buttons.

This operation can also be used with the up/down and right/left buttons on your computer's keyboard.

A mouse scroll wheel can also be used to adjust the value up and down.

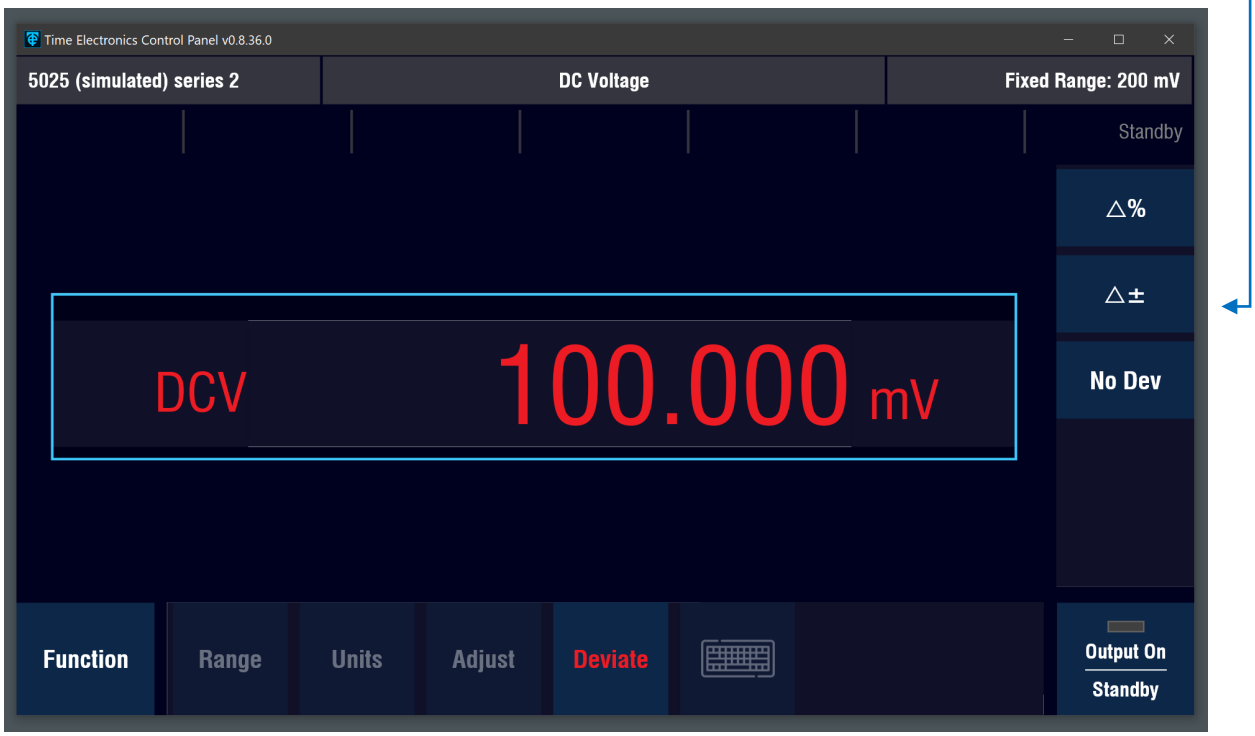
To close the adjust function, press the **Adjust** button.
To output the value, follow the steps on the previous page.

## 3.3 Deviation Mode

Certain functions can be used with deviation mode to vary the output as required.

When a function is selected, press the **Deviate** button:


The deviation control buttons will display on the sidebar:




You can choose to deviate by a percentage (%), or value.

When deviation mode is used, the display is dual line with the preset output value shown above the deviation value.

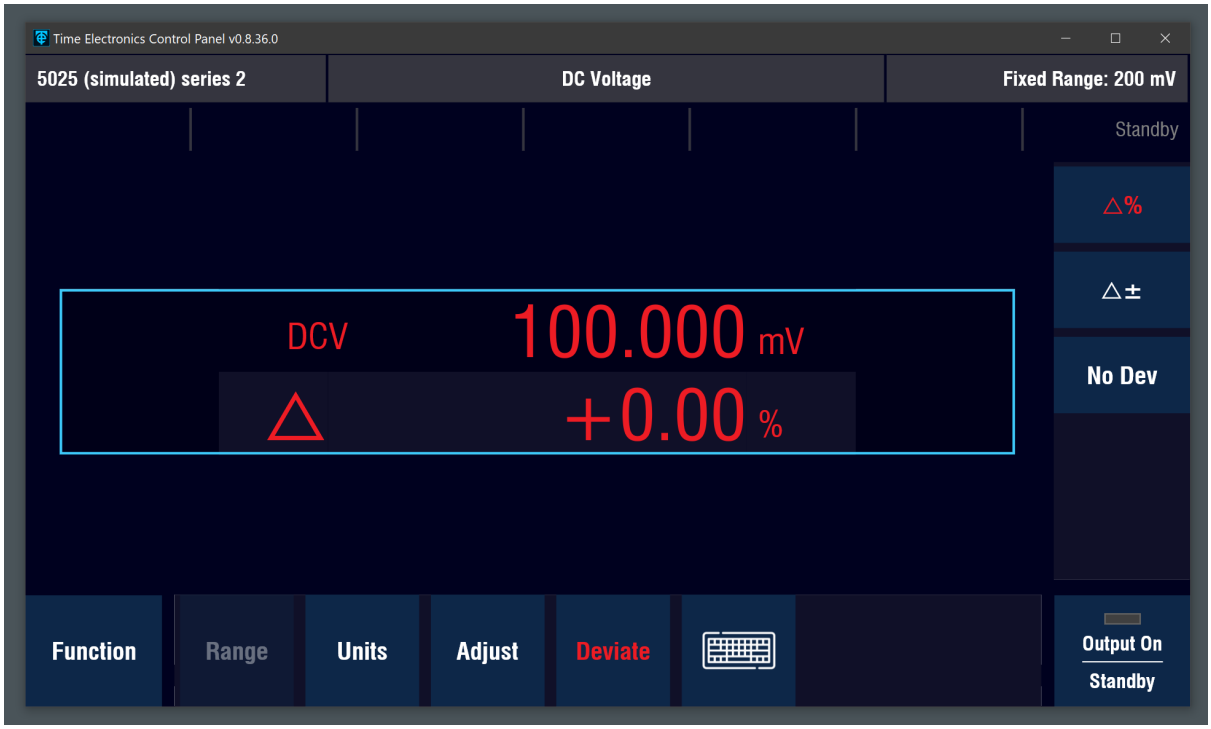

The method is commonly used with a measuring UUT to display and check the deviation between the calibrator's output value and UUT's specific set point.

**Note**: Your set output value will be within a range, so the deviation will only be allowable within the range limits. The calibrator will not auto-range when deviation is being applied.

## Percentage Deviation

To use percentage deviation press the △% button:


The deviation row will appear under the output display:




You can now enter a deviation value by:

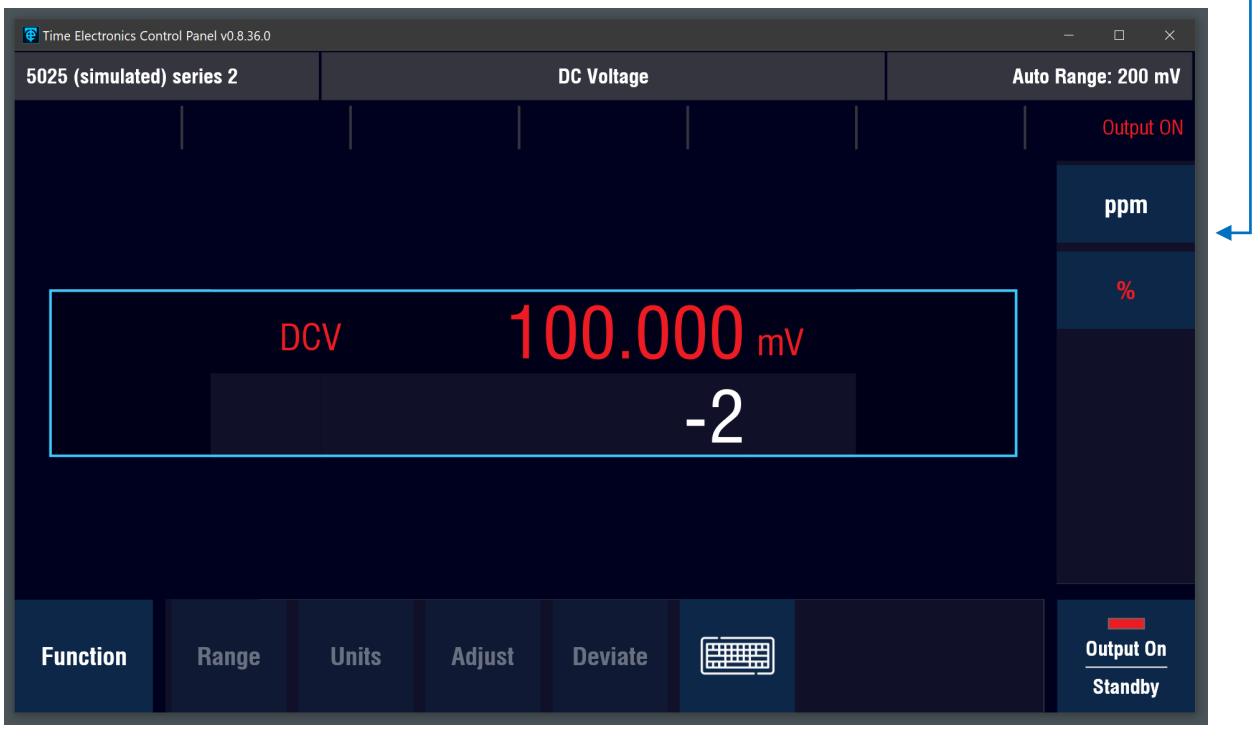
1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

*To exit the deviation mode, press the **No Dev** button.*

### Keyboard Entry

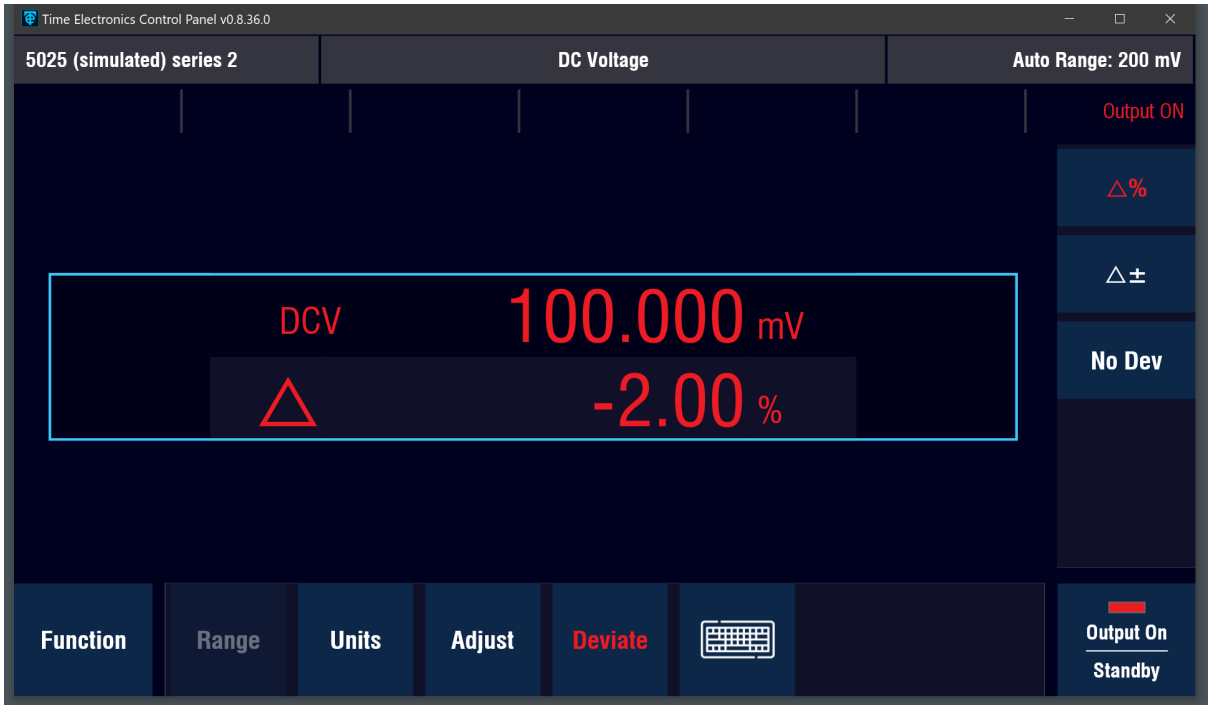
Using your computer's keyboard (or numeric keypad), you can enter a deviation value.

The deviation menu will give you the option to choose PPM or %.



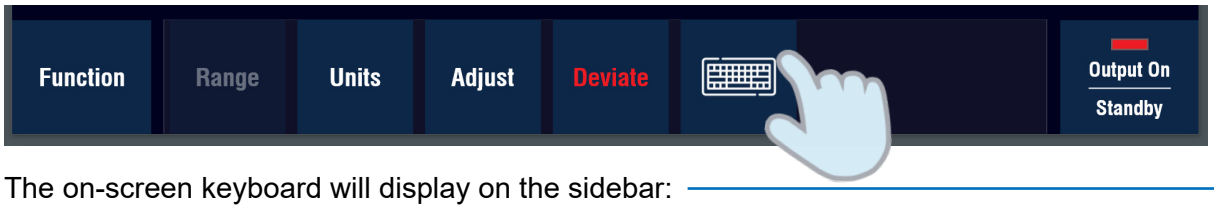

You can use the "enter key" on keyboard to continue with % deviation, or press the % button on screen. Or press PPM to select PPM deviation. Note that the +/- keys are pressed after the number to apply positive or negative.

Once entered, the deviation value will display below the output value. If the calibrator output is on, the deviated output value will be applied to the unit under test (ie 100 mV - 2%):

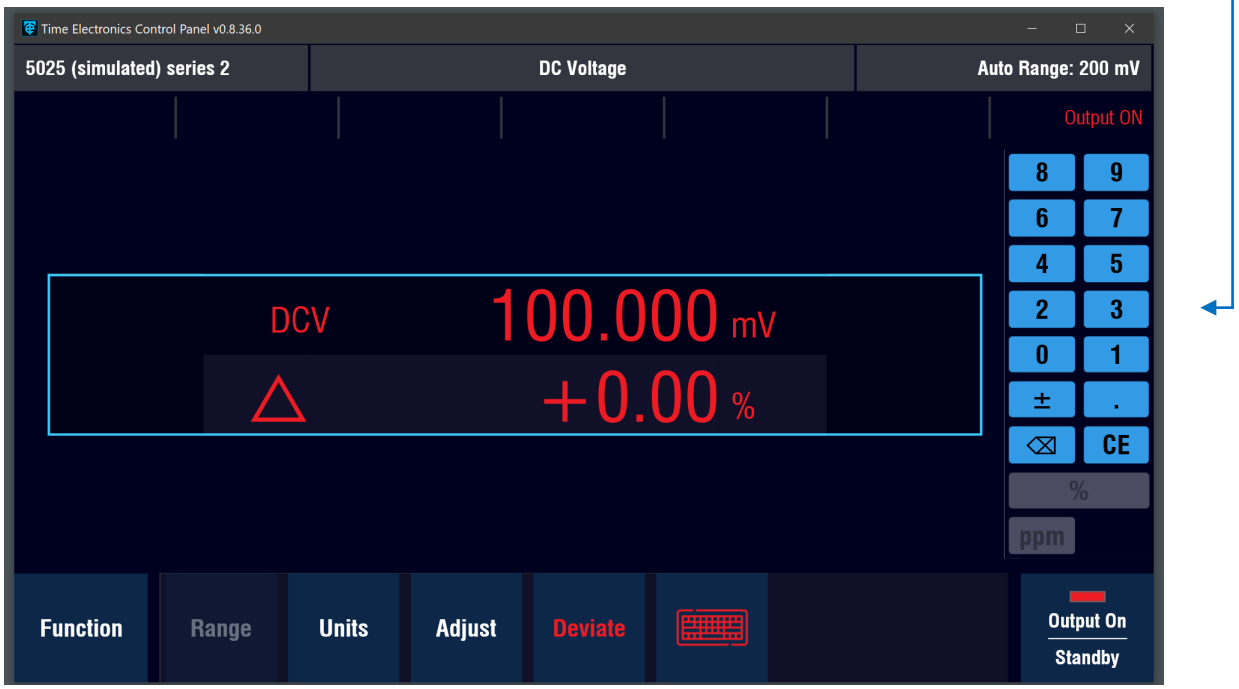


### On-screen Keyboard Entry

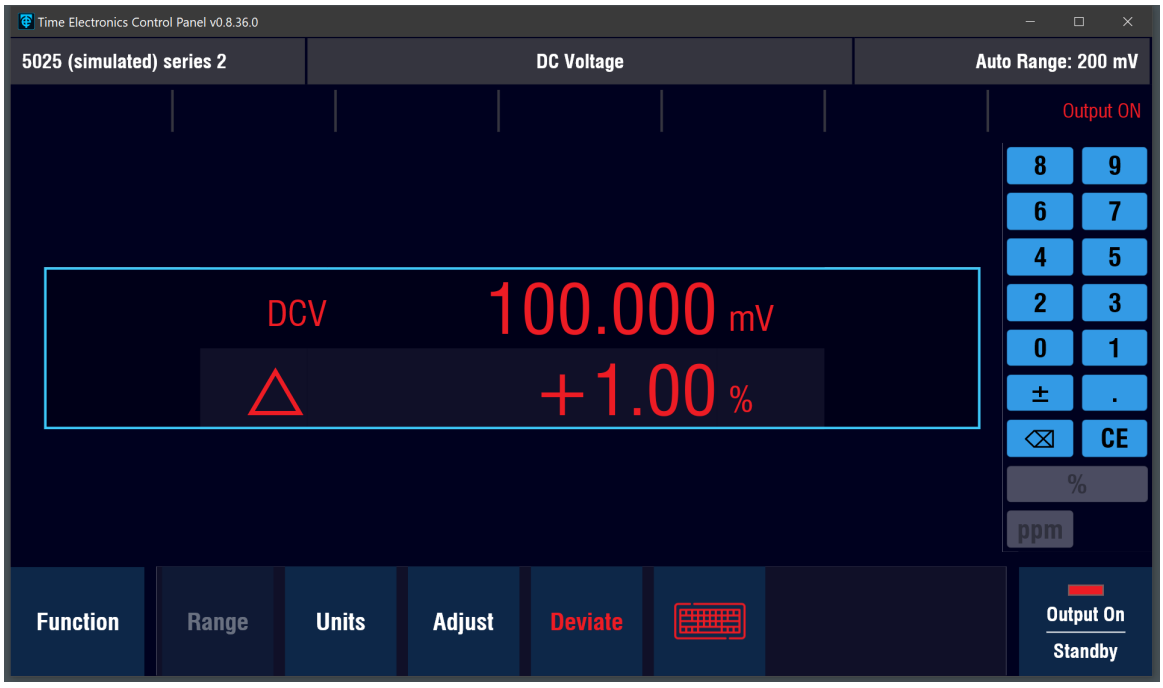
To use the on-screen keyboard, press the keyboard button:




The on-screen keyboard will display on the sidebar:




You can now enter the required value and press % or PPM to apply.
Once entered, the deviation value will display below the output value. If the calibrator output is on, the deviated output value will be applied to the unit under test (ie 100 mV + 1%):

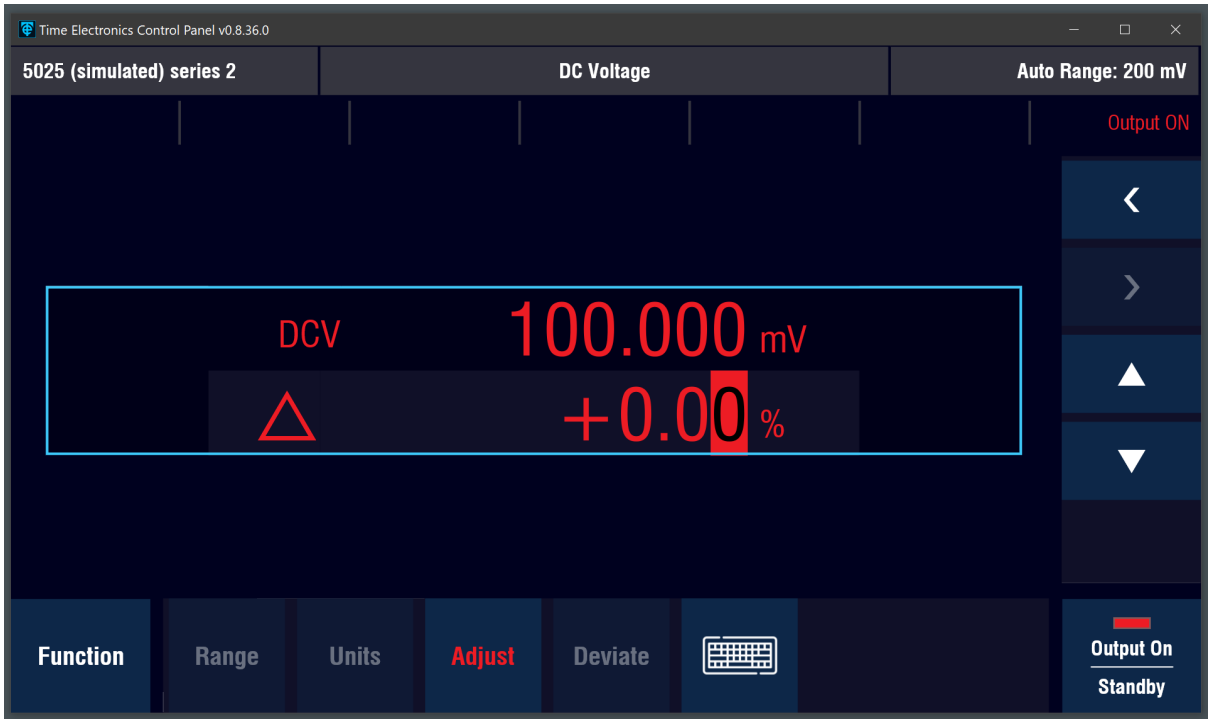


### Adjust Method

This method allows you to adjust the % deviation incrementally.

Press the **Adjust** button:


The adjust control buttons will display on the sidebar:




The lowest decimal point of the % will be highlighted. This is the finest adjustment. You can increment by using the up/down arrow buttons.

You can move the adjustment to the next decimal point using the right/left arrow buttons.

This operation can also be used with the up/down and right/left buttons on your computer's keyboard.

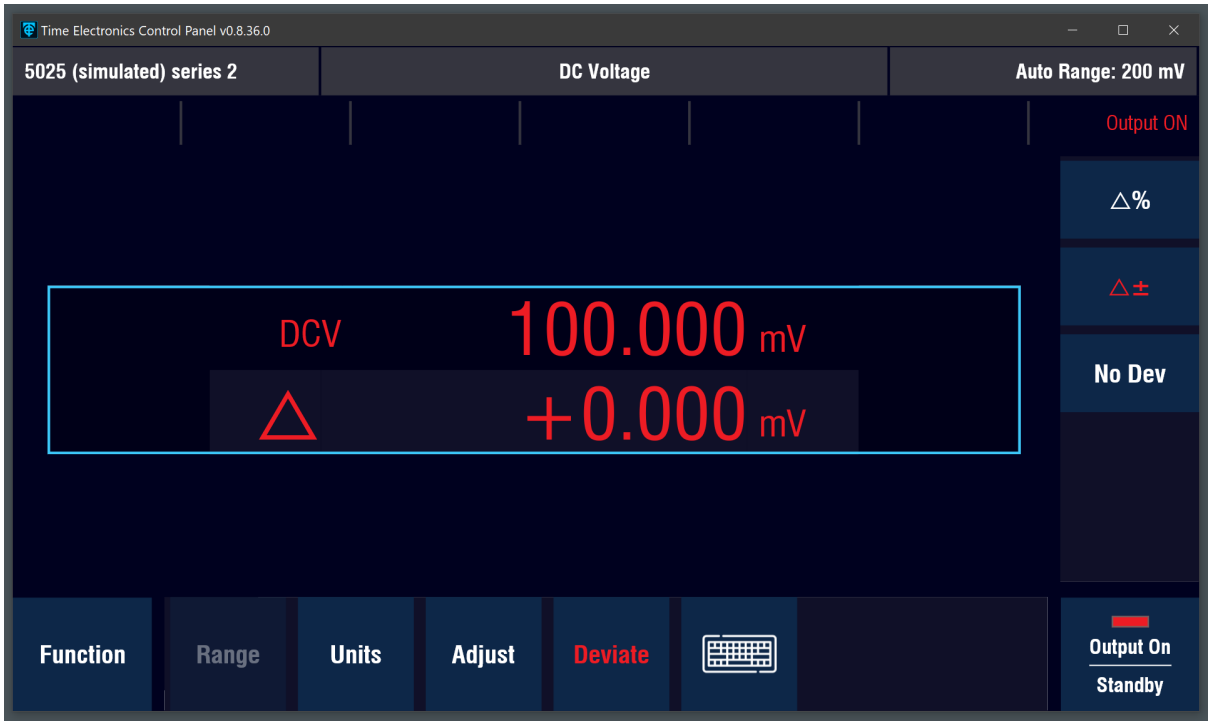
A mouse scroll wheel can also be used to adjust the value up and down.

To close the adjust function, press the **Adjust** button.

## Value Deviation

To use value deviation press the △± button:

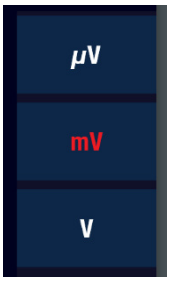

The deviation row will appear under the output display:




You can now enter values using the same methods as % deviation:

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Instead of selecting % or PPM, units are displayed in the sidebar for selection:

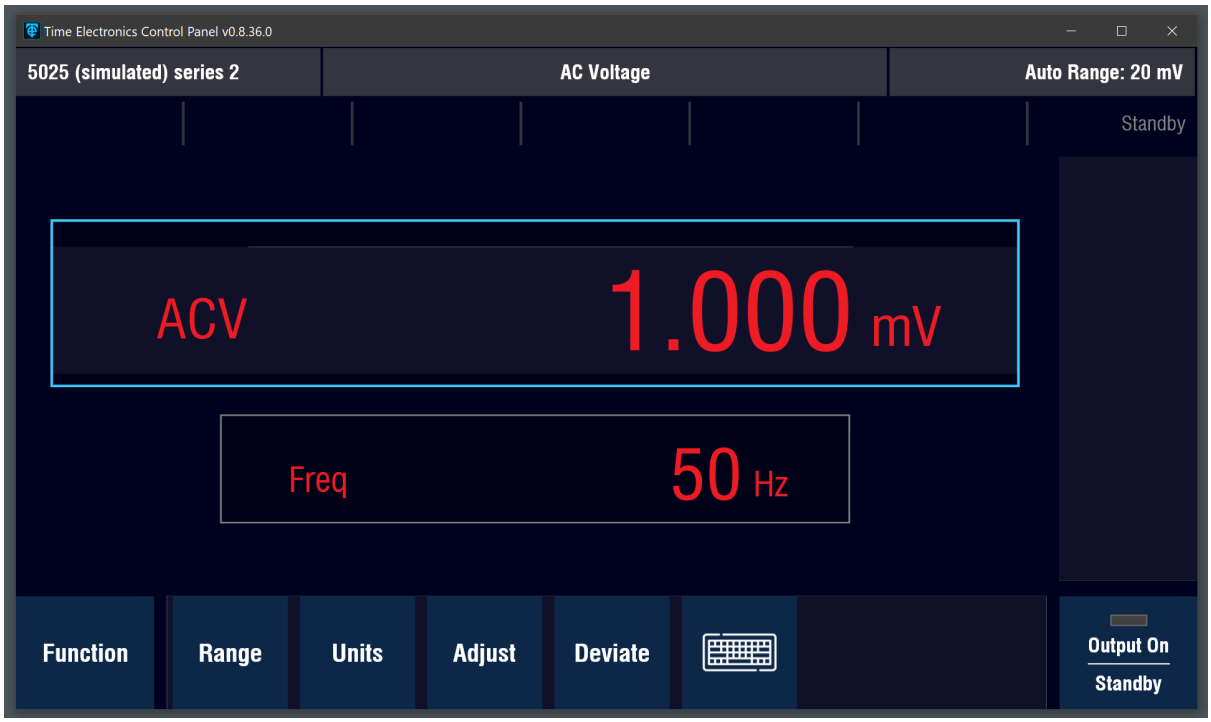



To exit the deviation mode, press the **No Dev** button.

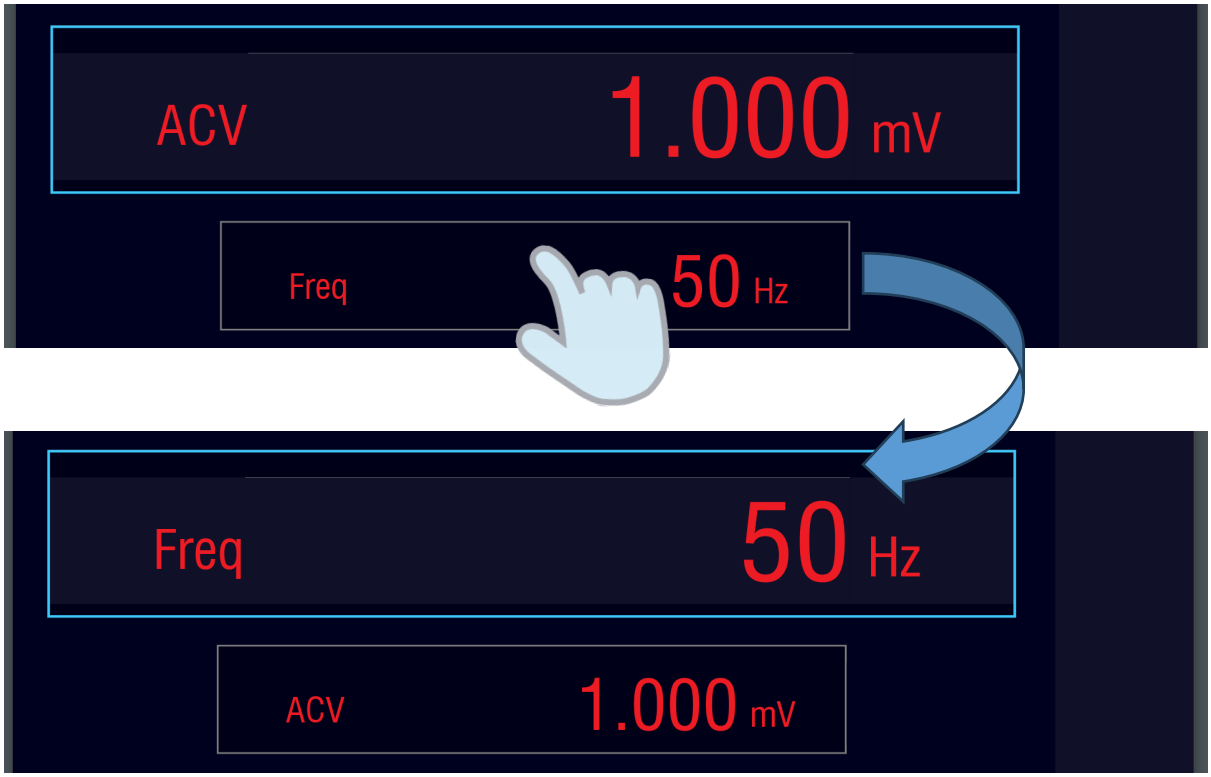
## 3.4 AC Voltage or Current **ACV | ACI**

AC Voltage and AC Current have common operation steps. Shown here is AC V.

Press the **AC V** button. The function screen will display:




Two displays will show for AC voltage and frequency. The main display is situated at the top, and is the active settable function. The displays can be quickly switched by pressing the lower display, making the frequency active for setting:



By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

### 3.4.1 Setting an Output Value

Setting the output on AC functions is the same as shown in the DC functions.

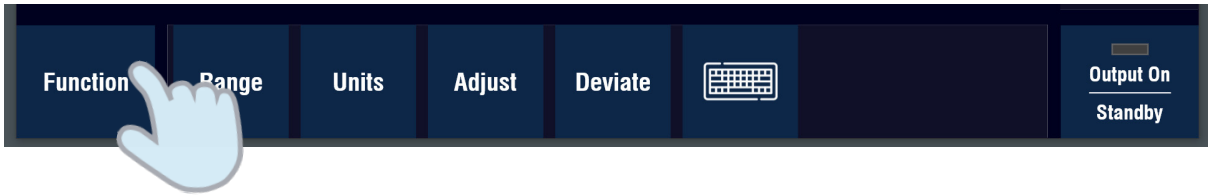
The methods are:

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

See section 3.2 for detailed instructions of these setting methods.

With AC functions the frequency can also be set and adjusted as required. Deviation mode is not available for frequency.

To exit the function, press the **Function** button.




The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.

## 3.5 Turn Coil Current Functions **Coil DCI | Coil ACI**

The DCI and ACI functions have extra ranges to complement the 9780 clamp coil.
The control panel application features separate function buttons for these operations.
When using Turn Coil ranges, the current displayed is a multiplication according to the range selected, as per the current that will be present at the coils of the 9780.

These ranges are:

- 2 A x 1
- 20 A x 1
- 2 A x 5
- 20 A x 5
- 2 A x 50
- 20 A x 50

The inductance loading for DCI is higher when using the Turn Coil ranges.
The frequency for ACI is limited to 100 Hz.

To use, press the **Coil DC** button. The function screen will display:

By default the application will set to lowest range (2A x 1). This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

Setting the output value is the same method as the DCI and ACI functions.
See section 3.2 and 3.4 for detailed instructions of these setting methods.

## 3.6 Power **PWR**

Power calibration is available by selecting the **PWR** button.
The option of DC or AC power will display:


### 3.6.1 DC Power

DC power displays DCV, DCI, and DCW. The voltage and current can be entered, deviated and adjusted as per DCV and DCI functions. The power is a calculated value based on the V and I inputs, you can change the units (mW, W, kW, VA).


Voltage will display as default at first. To enter a current value, press the DCI box and it will swap to being the active settable function.

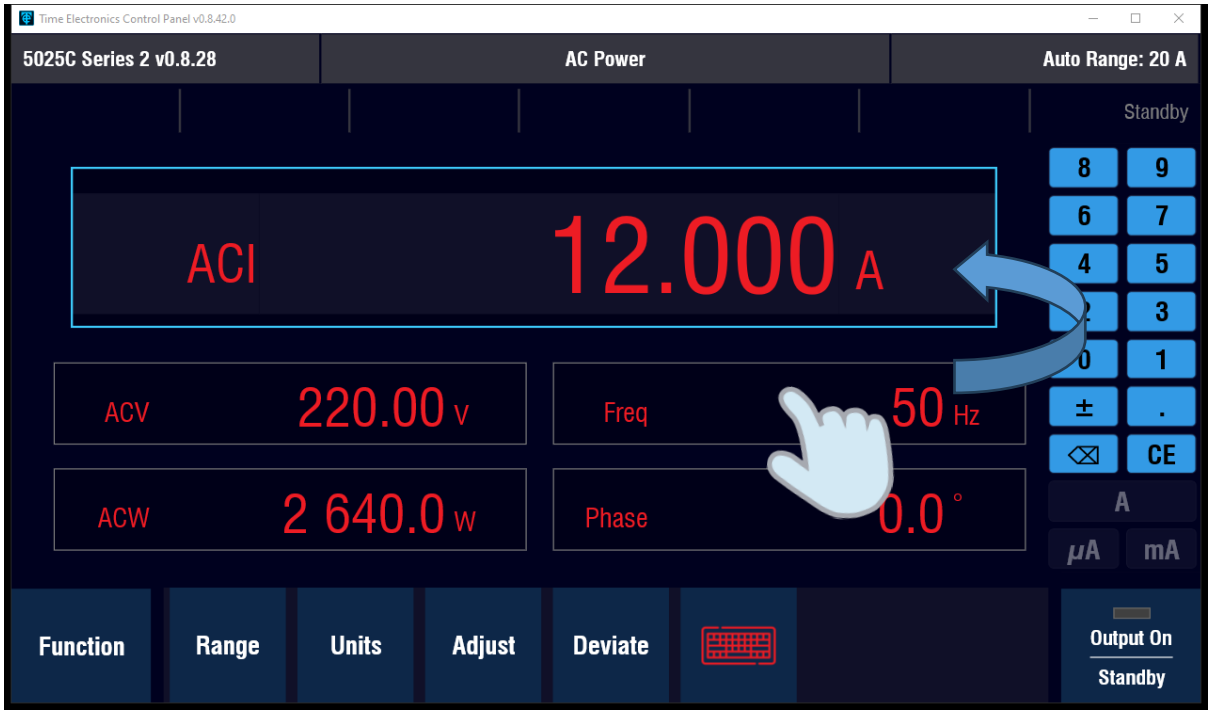
### 3.6.2 AC Power

AC power will display the functions required for the required output.

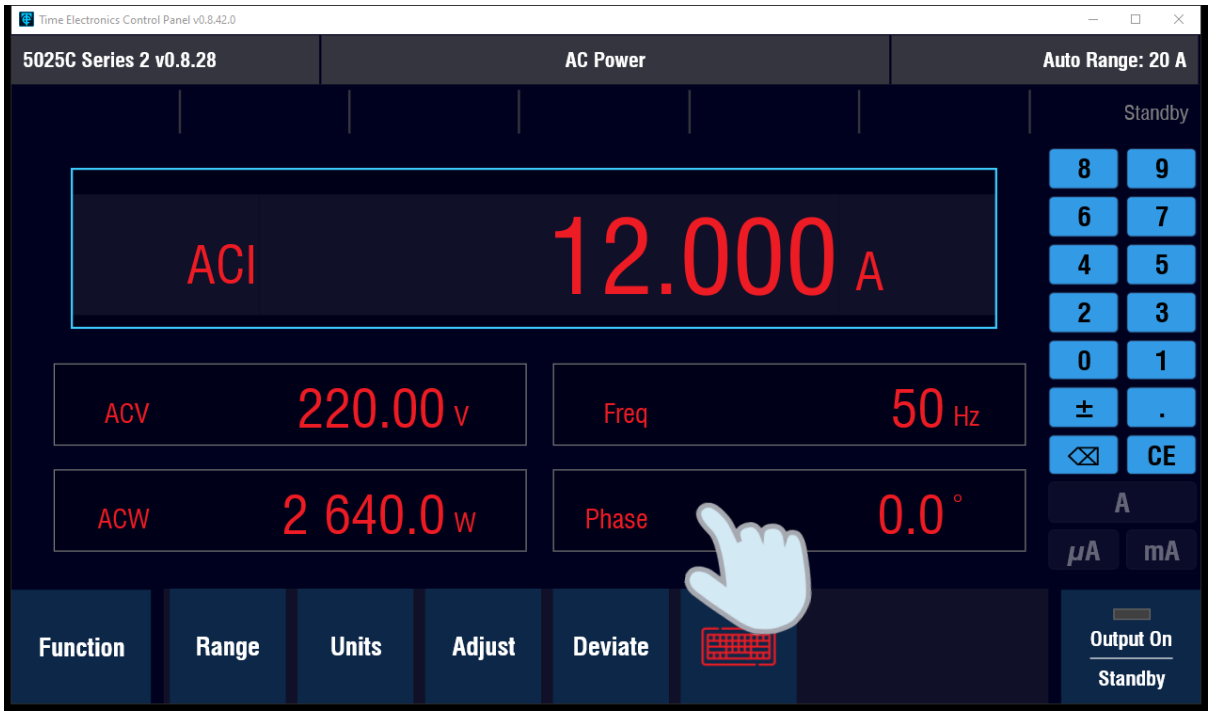
These will be AC voltage (ACV), AC current (ACI), Frequency (Freq), Power (ACW).
The additional display is for Phase or Power Factor.


The power (ACW) is a calculated value based on the function inputs, you can change the units (mW, W, kW, VA).

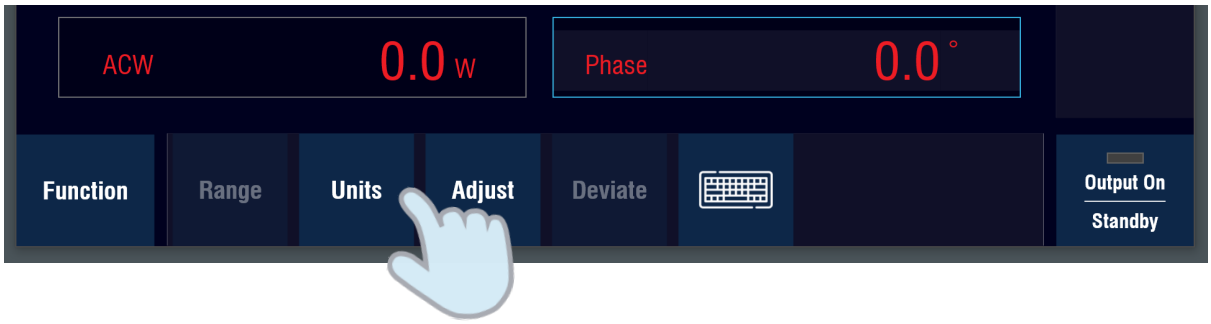
AC voltage, AC current, and frequency all swap to being the active settable function when pressed. You can enter and adjust these functions as required.



A Phase or Power Factor value can be entered, this is done pressing the **Phase** box:




Once selected the box will highlight in blue:

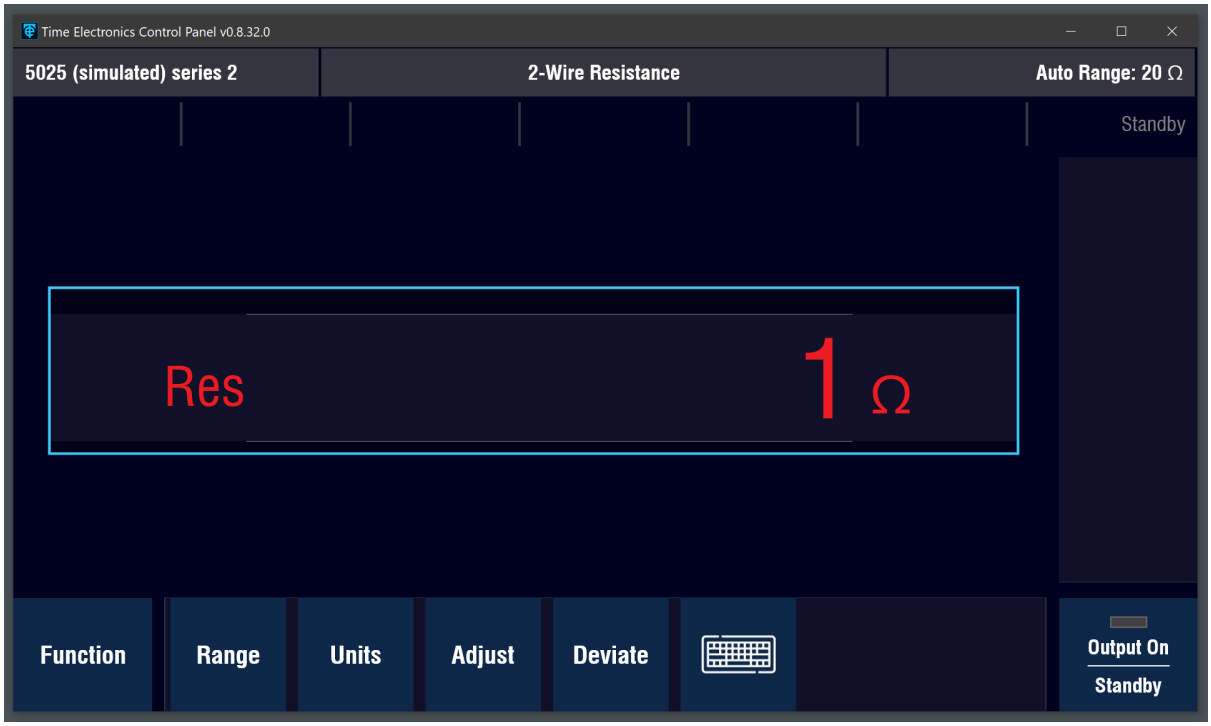



Either enter the required phase in degrees or press the **Units** button.


From the sidebar menu you can select degree **°** for phase, or **PF** for power factor.

## 3.7 Resistance Functions **2WΩ | 4WΩ**

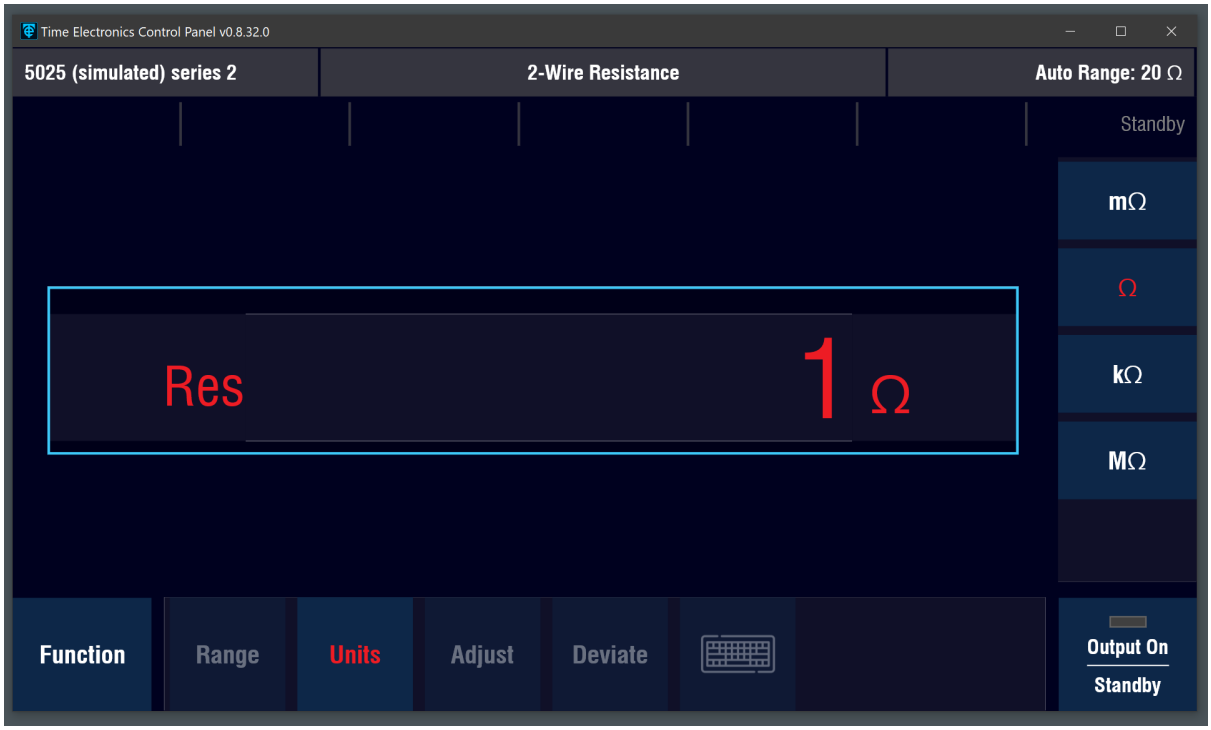
The 5025E-S2 features 2-wire variable resistance. The 5025C-S2 features both 2-wire variable resistance and 4-wire decade resistance.
2-wire variable resistance is selected by pressing the **2WΩ** button:




By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:




To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

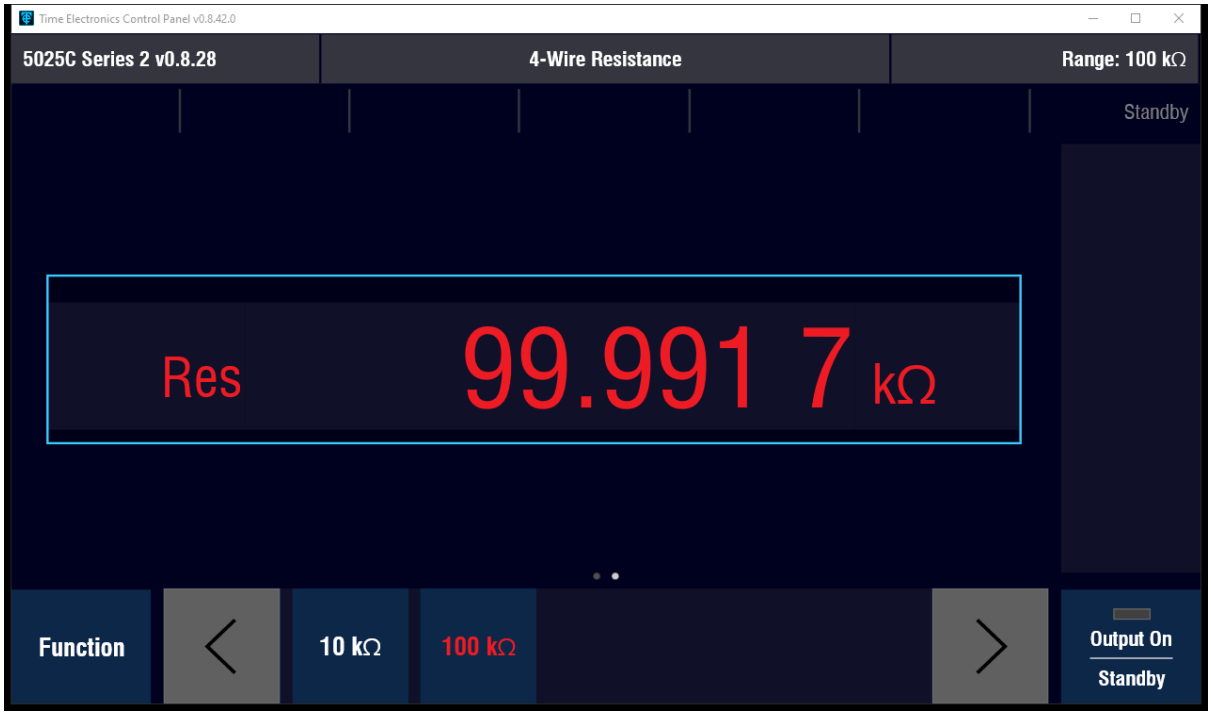
1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

To exit 2-Wire Resistance press the **Function** button. The output setting display will fade, and the other functions will show in the bottom menu, for selection.

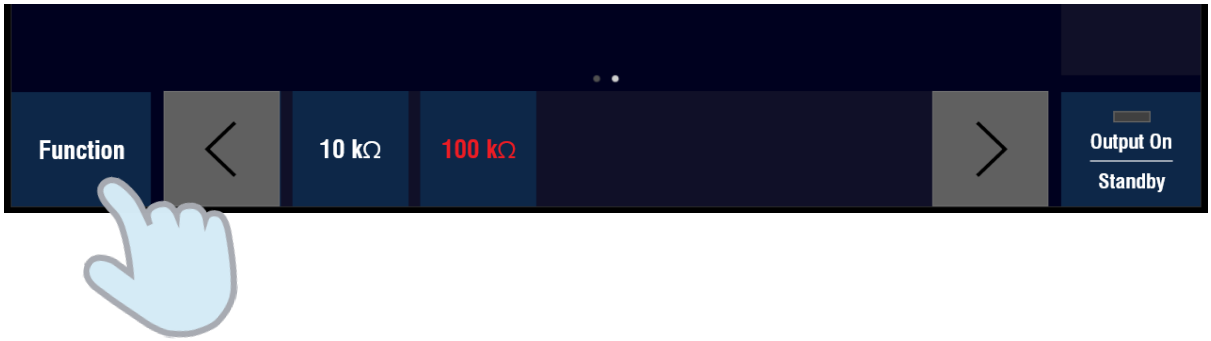
4-wire variable resistance is selected by pressing the **4WΩ** button:

When this option is fitted to the calibrator, decade resistance are fixed values that can be selected.



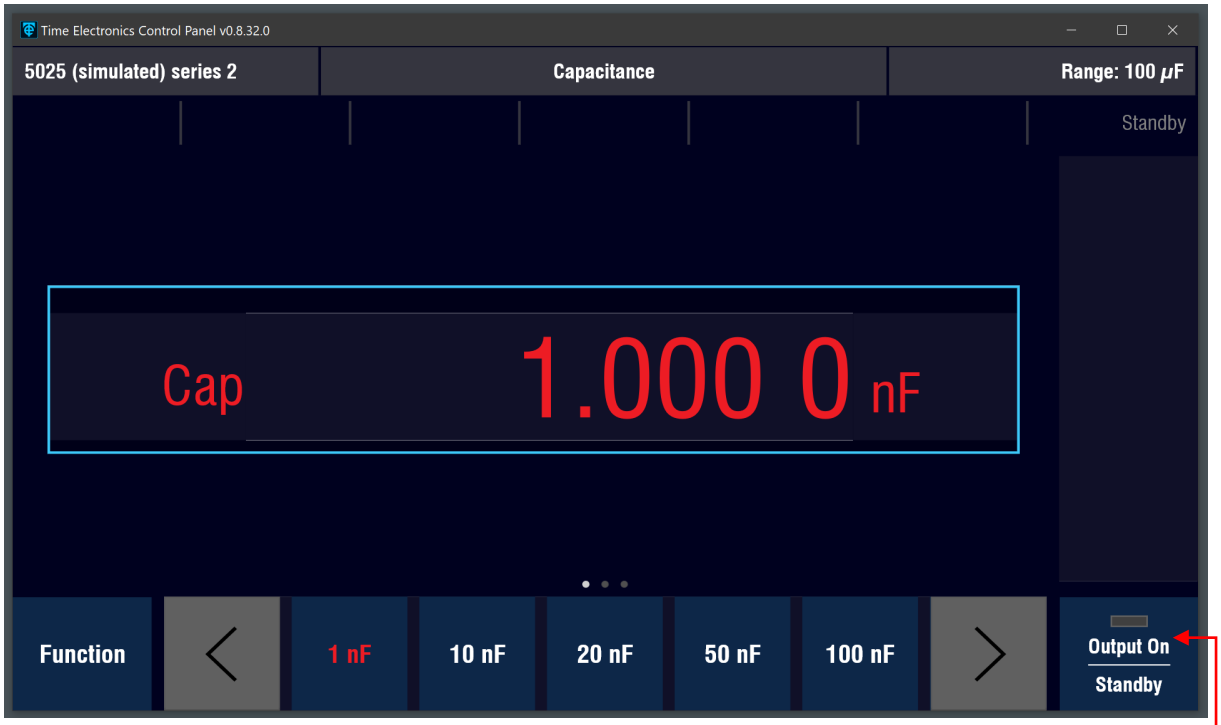

**Note:** 4-wire resistance is a set of fixed resistors that are displayed on the readout as calibrated values. This means the output will not indicate the nominal value (ie 1, 10, 100), but the actual value of the resistor from it's time of calibration. The same applies to capacitance and inductance functions.

To return to the function menu, press the function button:



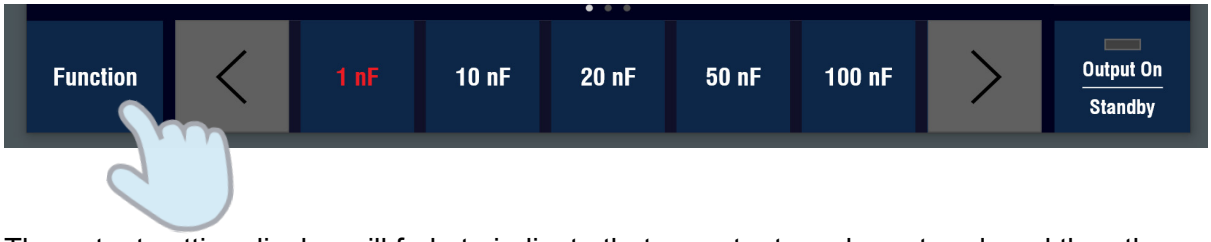
## 3.8 Capacitance **CAP**

Capacitance is available as fixed values that can be individually selected. Calibrated values are shown on the readout.
The function is selected by pressing the **CAP** button:

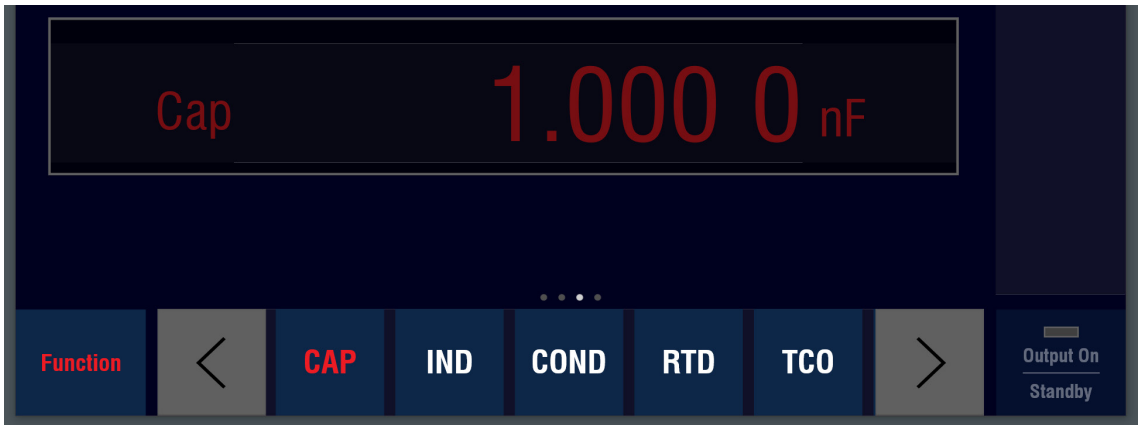



You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

To exit the function, press the **Function** button.

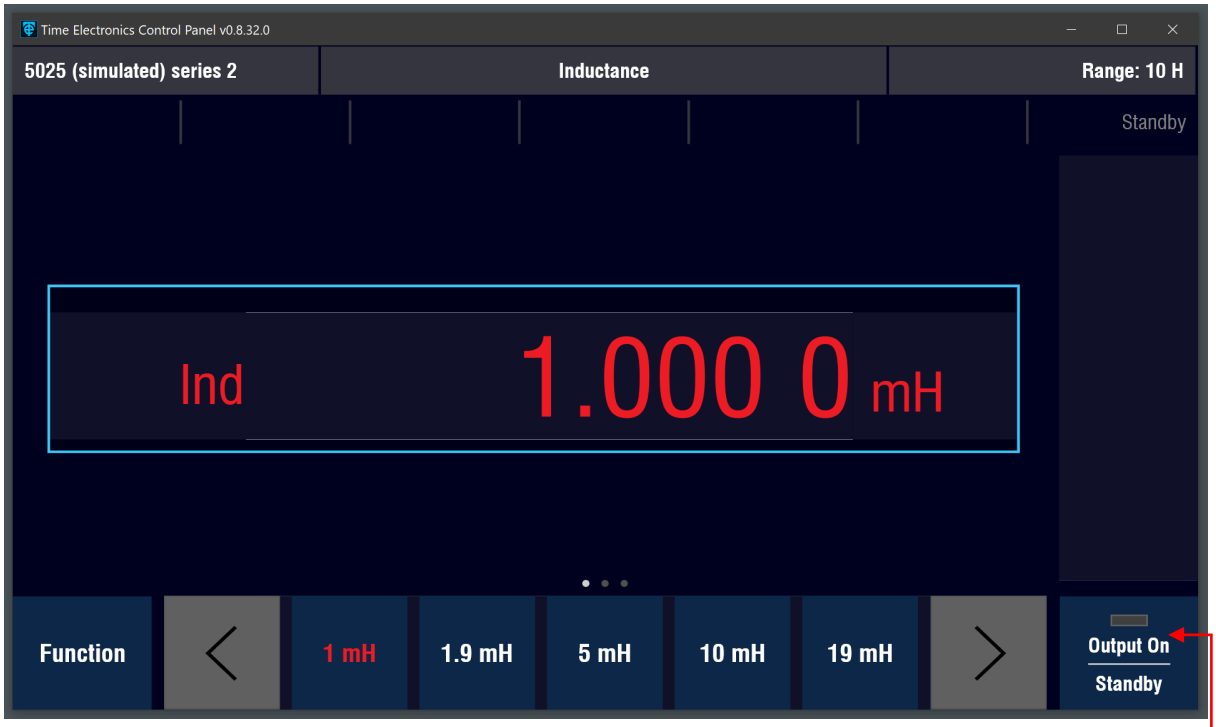



The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.



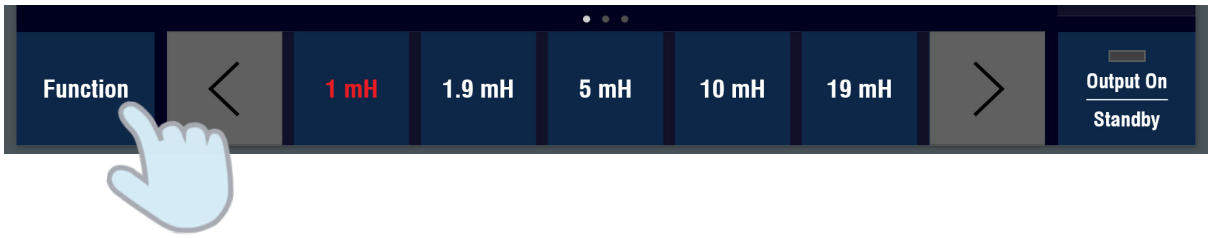
## 3.9 Inductance **IND**

Inductance (5025C-S2 only) is available as fixed values that can be individually selected. Calibrated values are shown on the readout.
The function is selected by pressing the **IND** button:

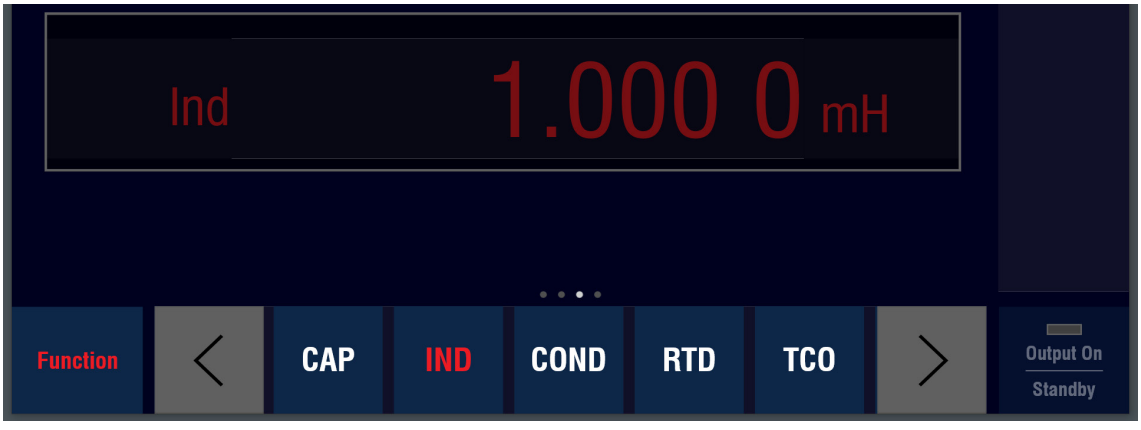



You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

To exit the function, press the **Function** button.



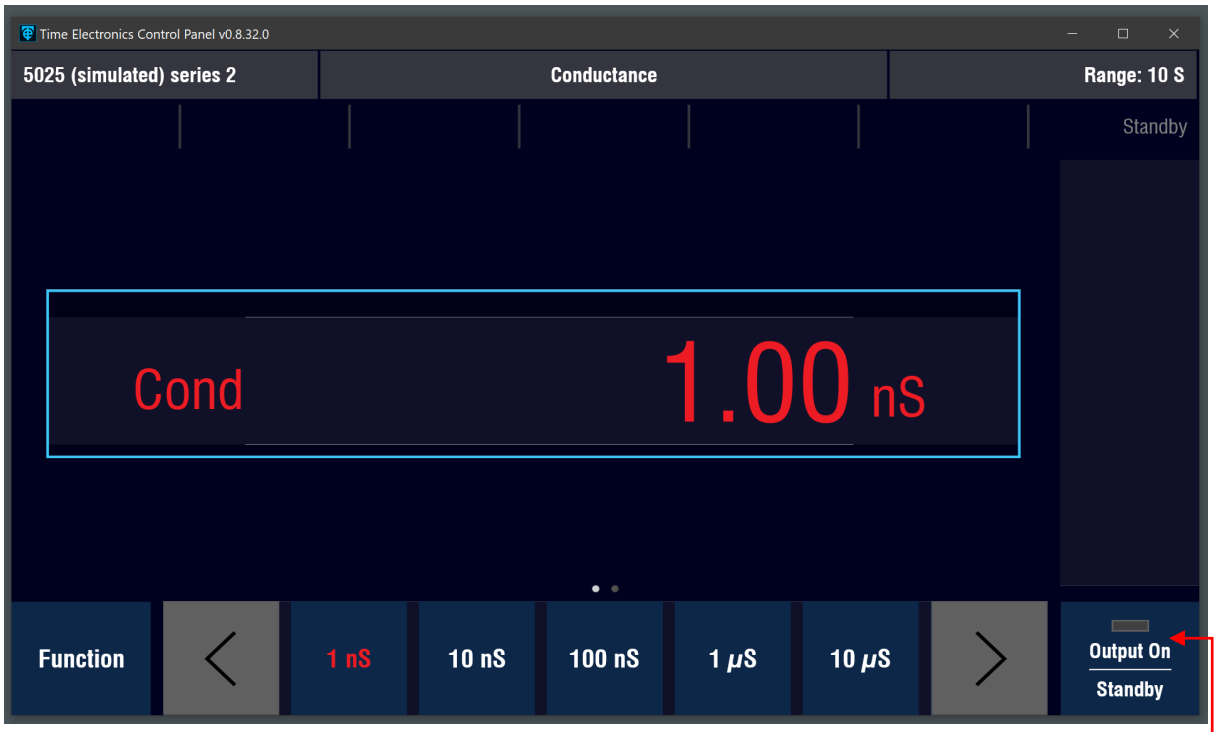

The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.



## 3.10 Conductance **COND**

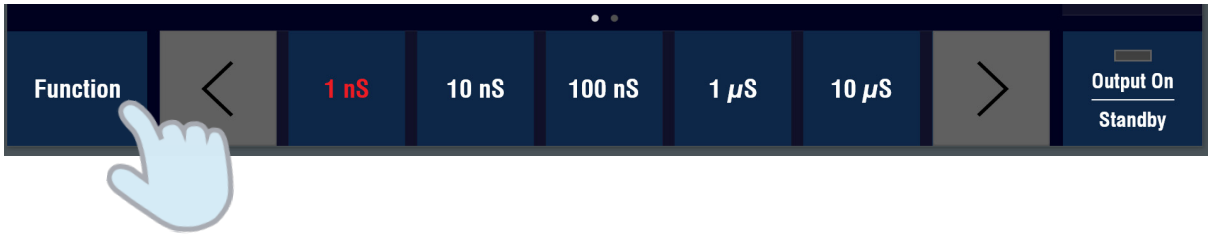
Conductance is available as fixed values that can be individually selected.

The function is selected by pressing the **COND** button:

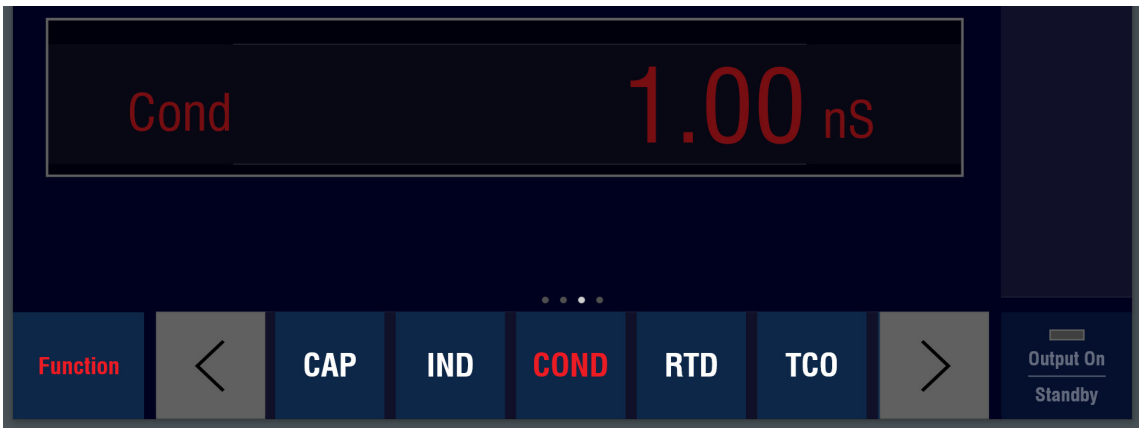



You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

To exit the function, press the **Function** button.

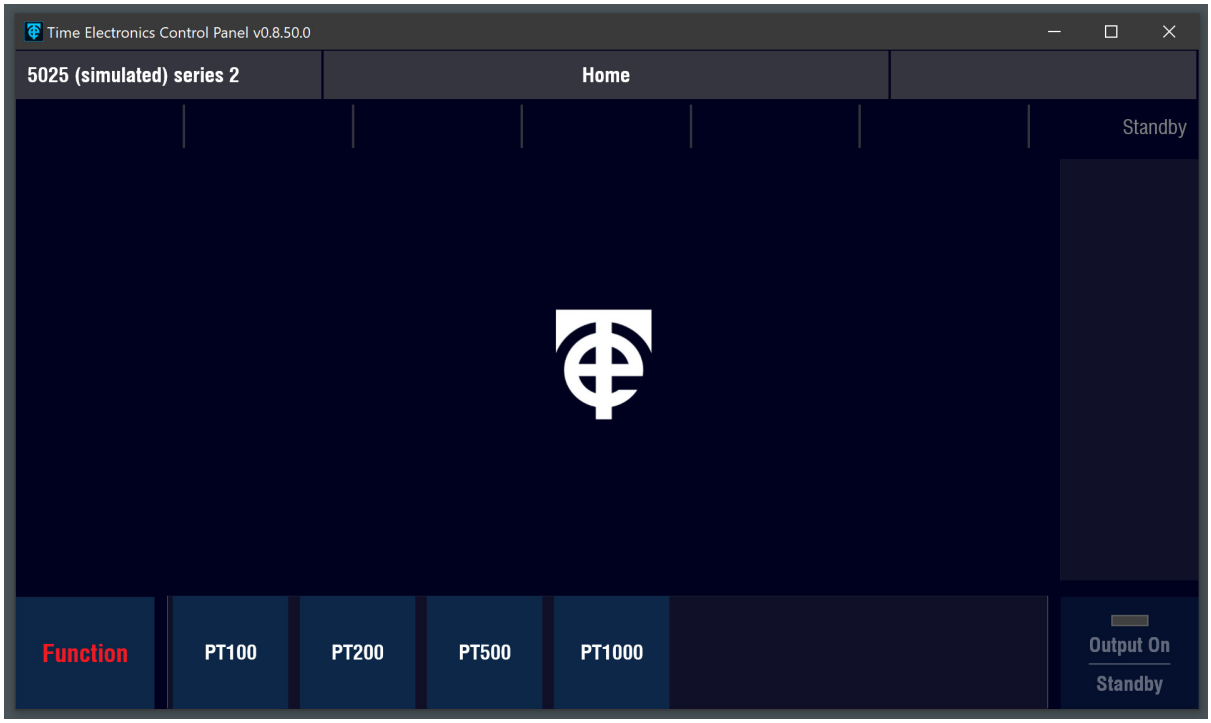



The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.



## 3.11 RTD Simulation **RTD**

RTD simulation can be selected by pressing the **RTD** button:




You can now select from Pt100, Pt200, Pt500, or Pt1000.

Once selected the RTD type will display and range will show in the information bar.


You can now enter a temperature for output from the calibrator.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

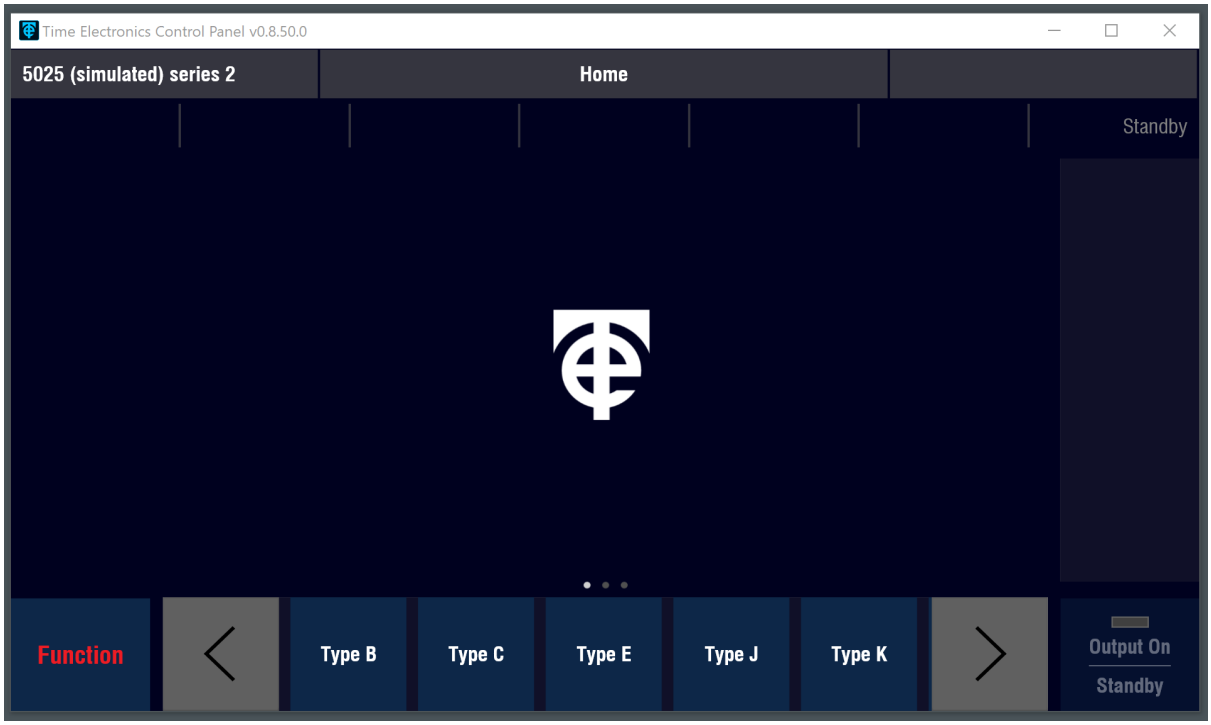
1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

To go back to the RTD selection menu, press the **Function** button. The output setting display will fade, and selection is possible. To exit RTD simulation, press function again.

## 3.12 Thermocouple Simulation **TCO**

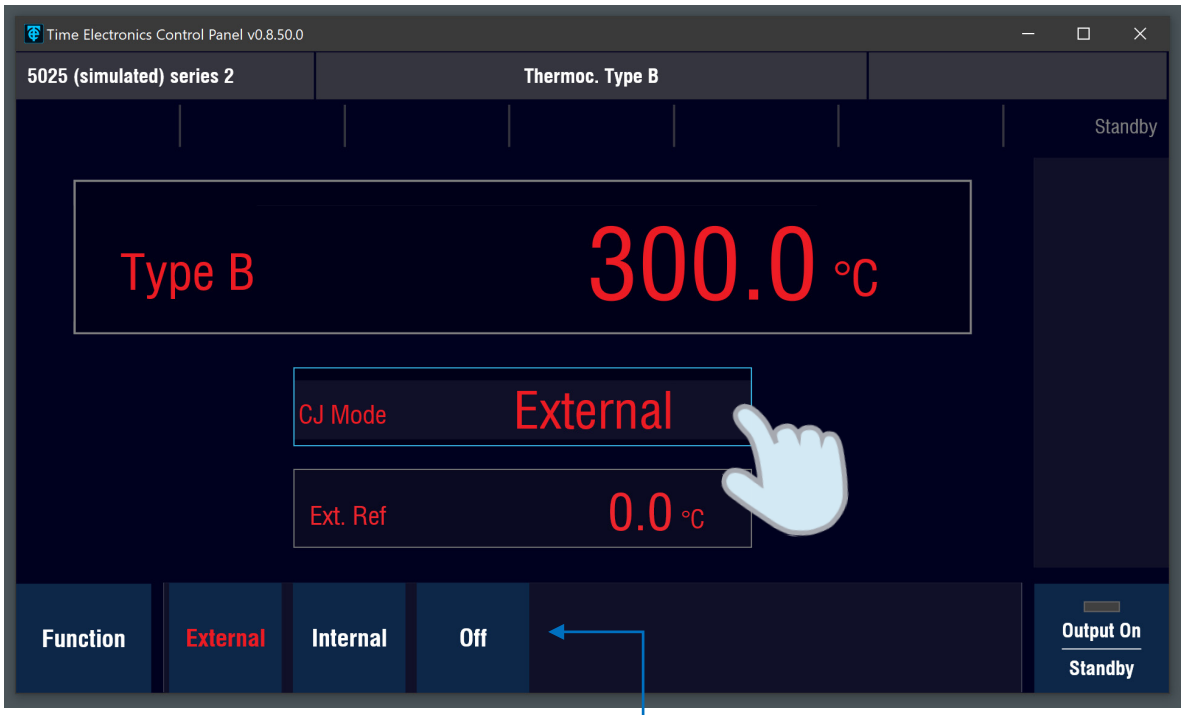
Thermocouple simulation can be selected by pressing the **TCO** button:




You can now select from the various types of thermocouples listed.
Once selected the thermocouple type will display and range will show in the information bar.


You can now enter a temperature value as required. Note that the display with the blue outline indicates the active state for user input. When you press a secondary lower display it will become active for user input or mode selection.

The default cold junction compensation setting is **External**. You can use this or change the mode to **Internal** or **Off**. To change the CJC mode press the **CJC Mode** display box:



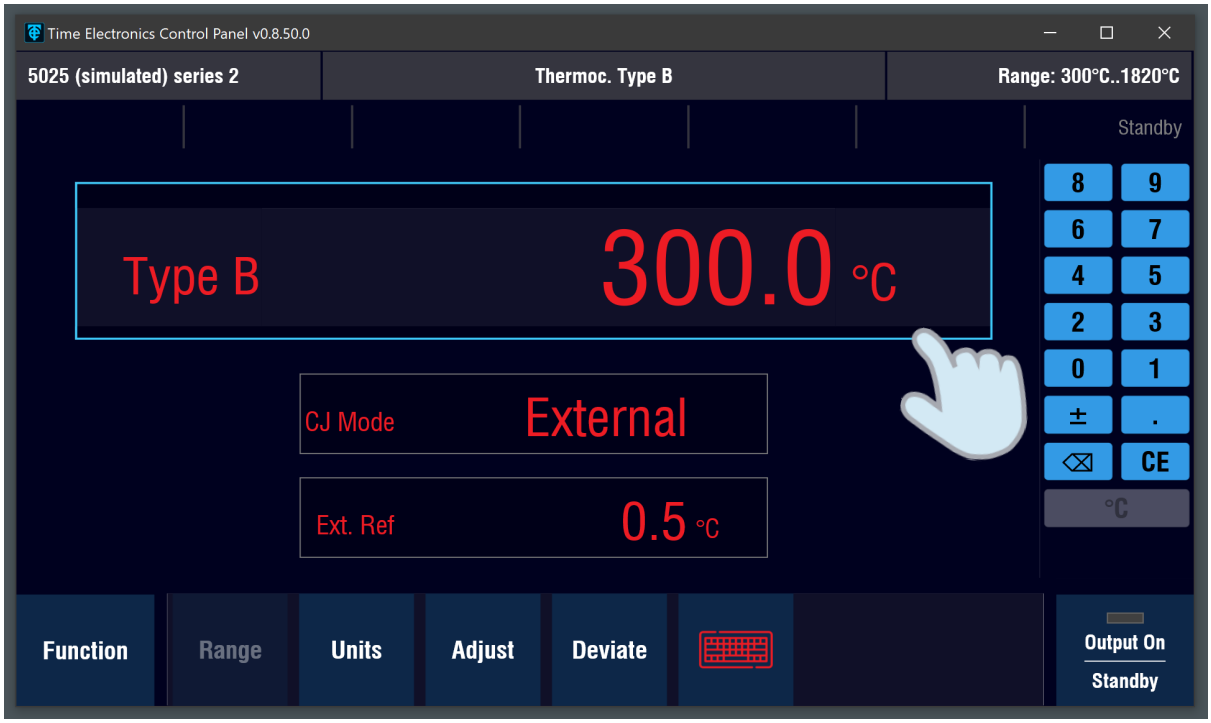

The 3 mode options will display at the bottom.

**External:** This setting allows a simulated cold junction temperature to be manually entered. Use this option if the junction from thermocouple alloy to copper is made externally and measured in temperature. This is common when using non-compensating cables and the UUT cold junction compensation is enabled.
To enter the CJC external value, press the **Ext Ref** display box and input the temperature.

The range of the allowable temperature value is shown in the right of the info bar.
You can enter the reference temperature by:

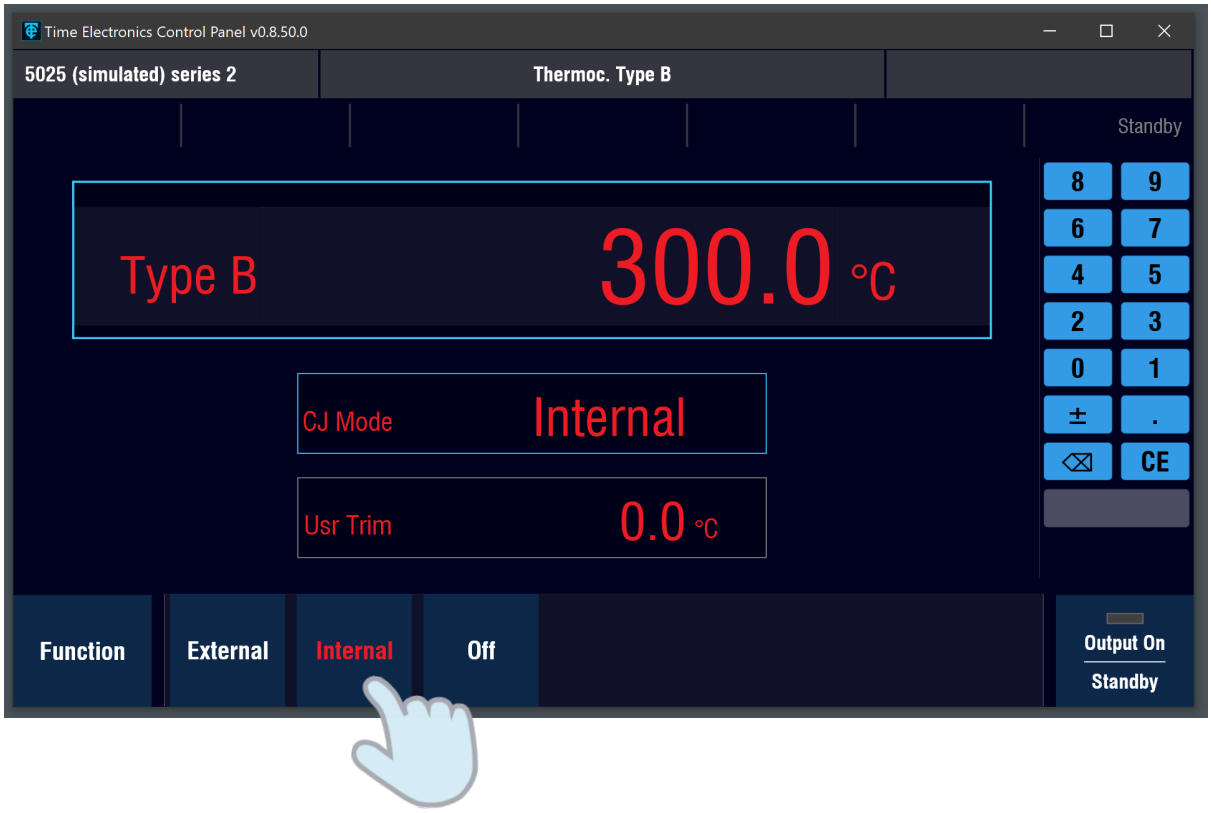
1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method


To exit the external reference setting press the main display box. Then you can enter the required temperature output and the external reference will be applied.



**Internal:** This setting uses the front panel terminals as the cold junction. Use this if the UUT is connected to the front panel terminals using compensating cables (cables of the same alloy as the thermocouple being simulated).

To use, press the CJC Mode display, then the **Internal** button at the bottom:



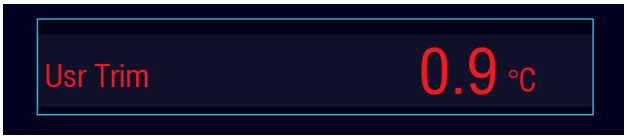

The CJ mode will show **Internal**, and the lower display provides the option for **User Trim**.

This option means that the calibrator's internal cold junction reference value can be trimmed by this additional setting, to correct for any thermal drifts or inaccuracies due to the UUT's cold junction compensation.

In effect it is a zeroing mechanism that allows the accuracy of the UUT's cold junction compensation to be disregarded and calibration performed purely on the UUT's capability to measure the EMF voltages for the specified thermocouple type.

You can enter the trim value temperature by:

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method




To exit the internal reference setting press the main display box. Then you can enter the required temperature output and the internal reference and trim value will be applied.

**Off**: This setting disables any cold junction reference. Use this if the UUT's cold junction compensation can be set to zero or if the junction from thermocouple alloy to copper wire is made in an ice bath.

To use, press the CJC Mode display, then the **Off** button at the bottom:


To exit the Off mode setting, press the main display box. Then you can enter the required temperature output.

### Temperature Units

To change the temperature units, ensure the main display is selected, then press the **Units** button.

This opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

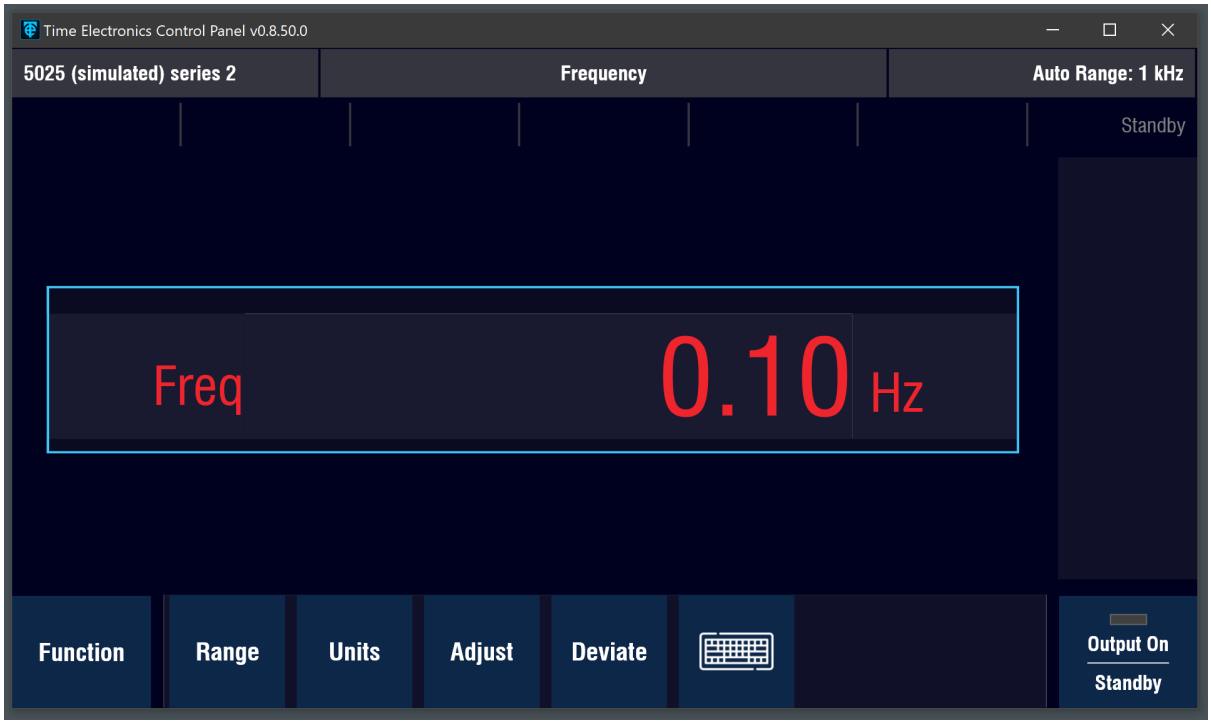
1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

To go back to the thermocouple selection menu, press the **Function** button. The output setting display will fade, and selection is possible. To exit, press **Function** again.

## 3.13 Frequency **FRQ**

Digital frequency is selected by pressing the **FRQ** button:




By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

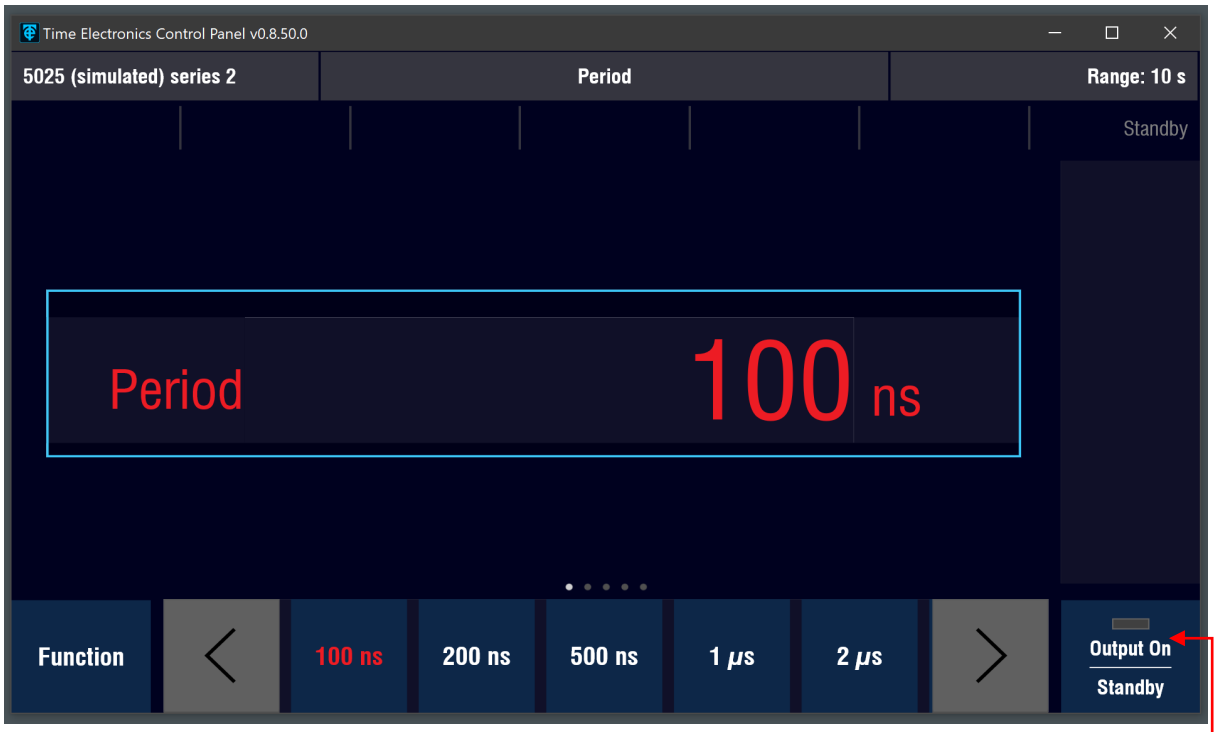
To exit the function, press the Function button.

The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.

## 3.14 Period **PER**

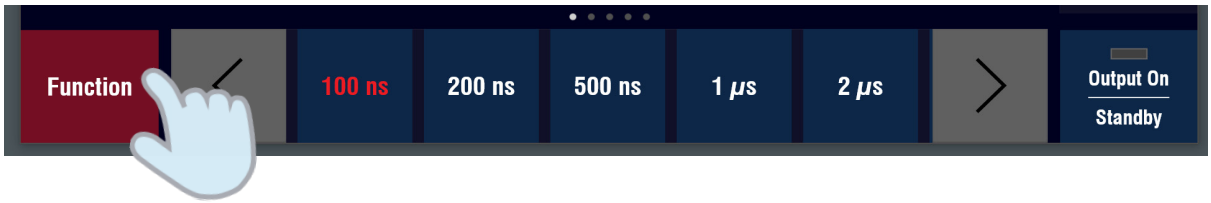
Period is available as fixed values that can be individually selected.

The function is selected by pressing the **PER** button:

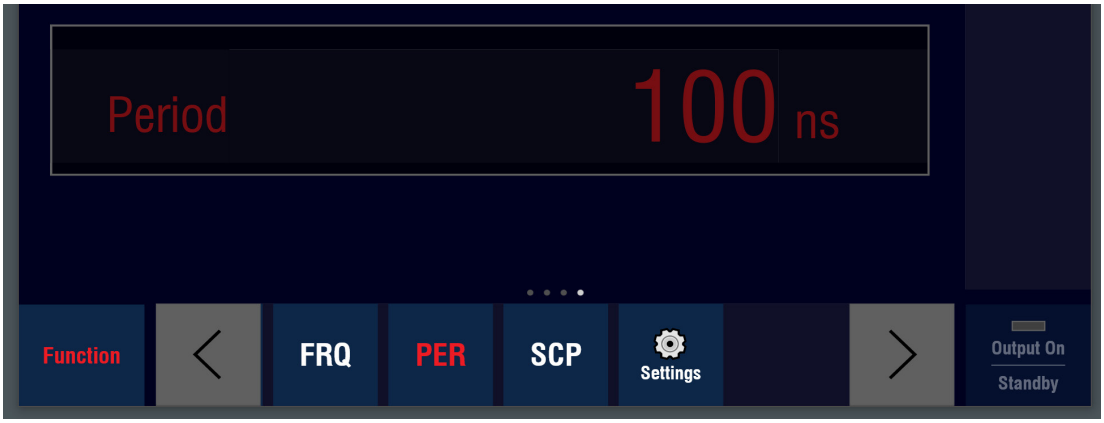



You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

To exit the function, press the **Function** button.




The output setting display will fade to indicate that no output can be entered, and the other functions will show in the bottom menu, available for selection.

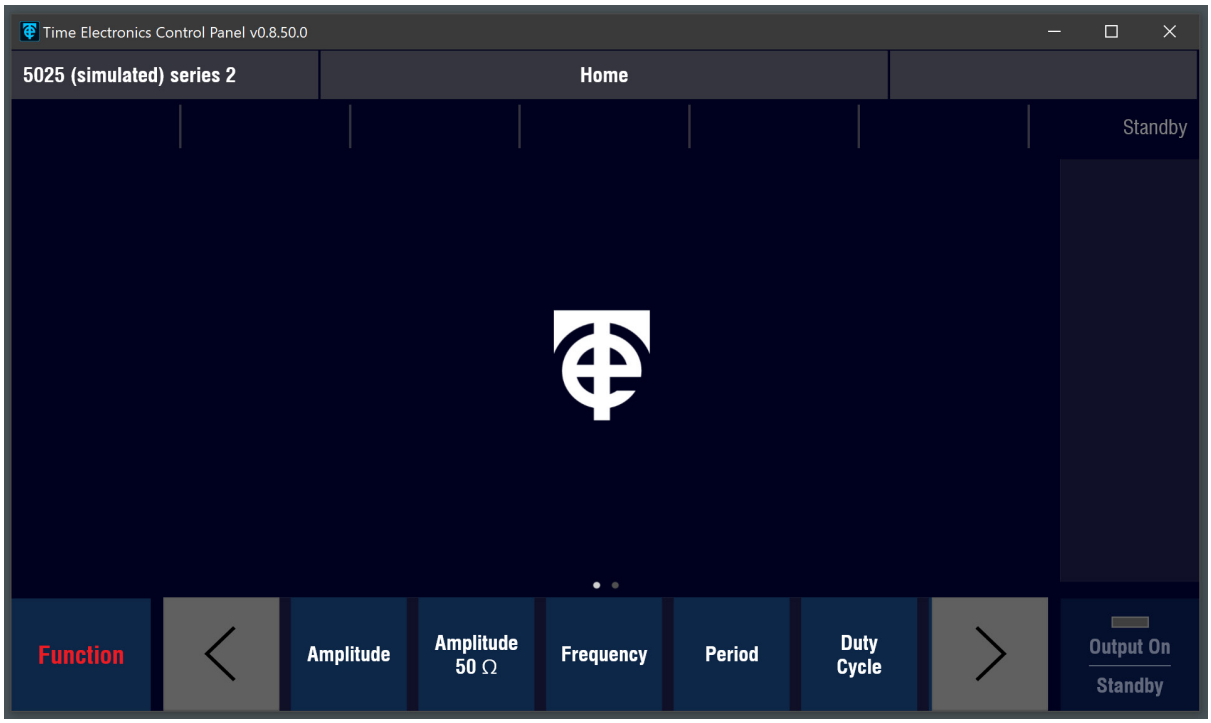


## 3.15 Scope Calibration **SCP**

The oscilloscope calibration option that is available in the control application when fitted to a calibrator. It provides:

- **Amplitude** for calibrating the voltage gain. (Vertical deflection)
- **Frequency and Period** for calibrating the time base. (Horizontal deflection)
- **Fast Rise** for rise time calibration and bandwidth determination.
- **Duty Cycle** for verifying duty cycle measurements.
- **Levelled Sine** for bandwidth calibration (frequency response) and trigger functions.

The function is selected by pressing the **SCP** button:

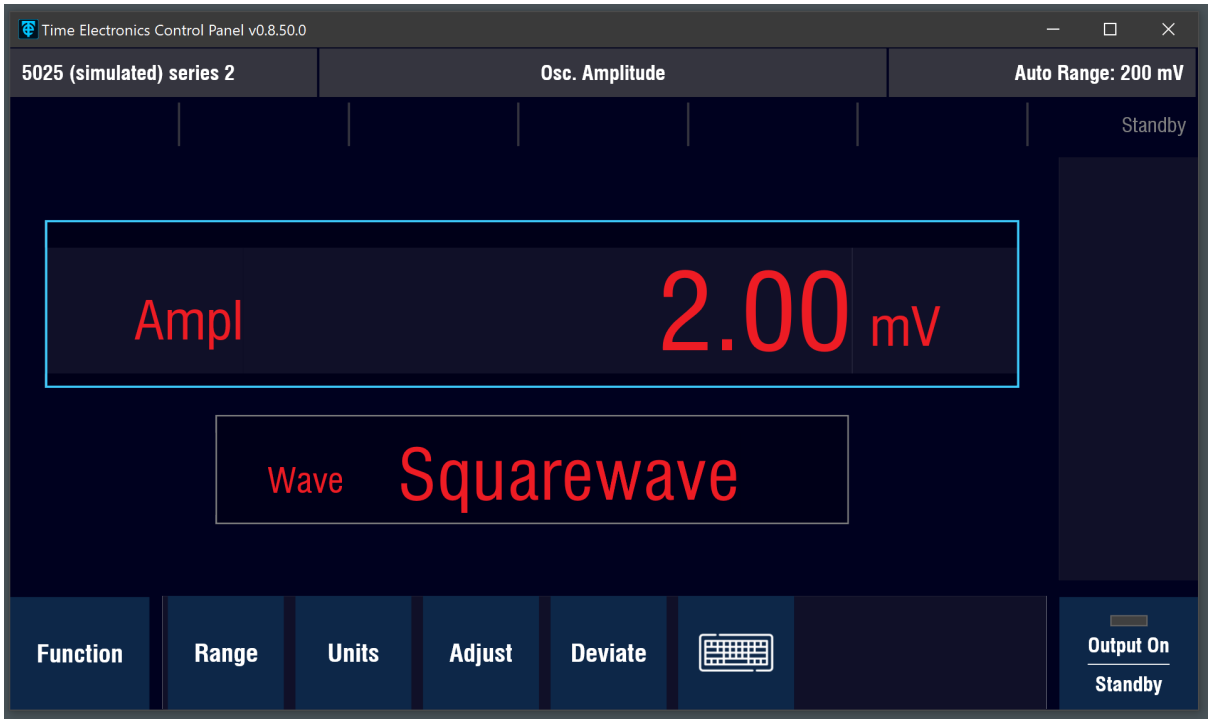



The menu buttons for scope calibration are displayed at the bottom. These are:

- Amplitude
- Amplitude 50 Ω
- Frequency
- Period
- Duty Cycle
- Fast Rise
- Levelled Sinewave

### 3.15.1 Amplitude

Select by pressing the **Amplitude** button:




The wave can be set as Squarewave or DC. Press the **Wave** box and select from the two options in the bottom menu:

By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:


To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display will fade, and selection is possible. To exit, press **Function** again.

### 3.15.2 Amplitude 50 Ω

This function is the same operation as amplitude.
Select by pressing the **Amplitude 50 Ω** button:


The wave can be set as Square or DC. Press the **Wave** box and select from the two options in the bottom menu.

**Range:** By default the application will set to auto-range. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges. To close the Range sidebar menu, press the **Range** button.

**Units:** The **Units** button opens a sidebar menu that allows you to change the units as required. To close the Units sidebar menu, press the **Units** button.

#### Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display will fade, and selection is possible. To exit, press **Function** again.

### 3.15.3 Frequency

Frequency in the Scope Calibration Function is available as fixed values that can be individually selected.

The function is selected by pressing the **Frequency** button:


You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

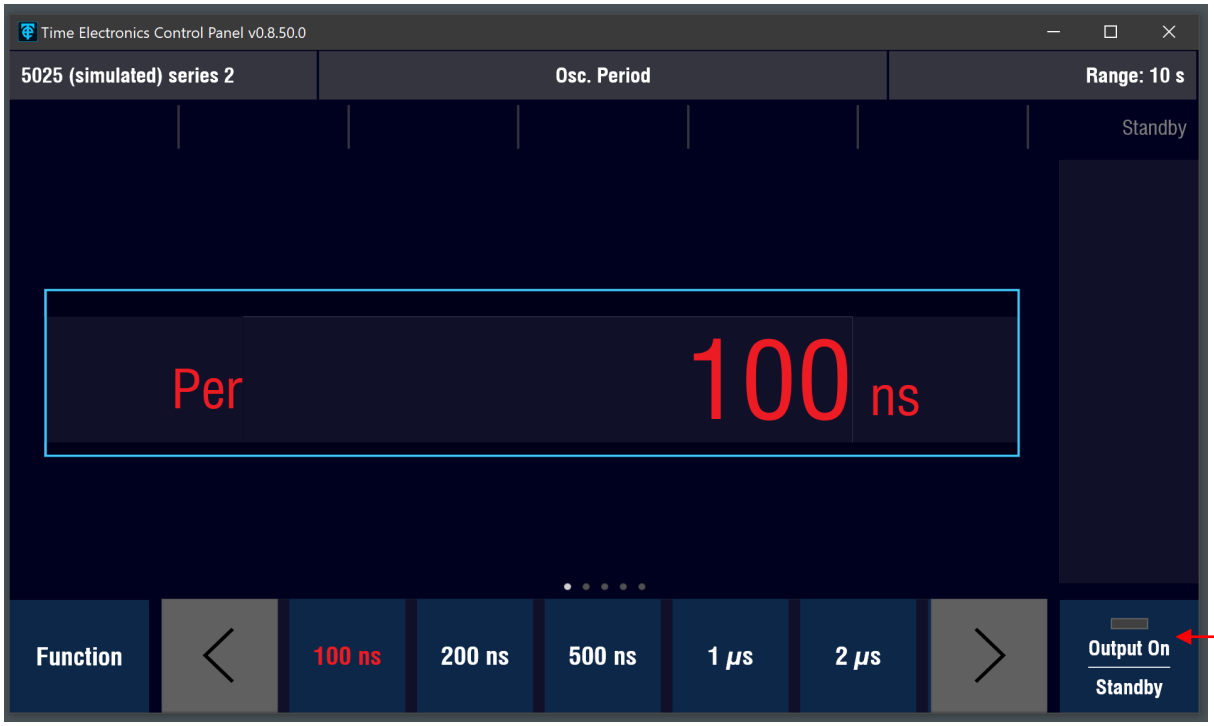
To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display box will fade, and selection is possible.

To exit, press **Function** again.

### 3.15.4 Period

Period in the Scope Calibration Function is available as fixed values that can be individually selected.

The function is selected by pressing the **Period** button:




You can now select the from the fixed values listed. Use the left/right arrows to access the complete list. Once selected, press and hold the **output on** button for 2 seconds to output.

To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display box will fade, and selection is possible.

To exit, press **Function** again.

### 3.15.5 Duty Cycle

Select by pressing the **Duty Cycle** button:


Select the frequency (100 Hz, 1 kHz, 10 kHz) from the menu buttons at the bottom.

Then press the **Duty** display box and enter the required % duty cycle.

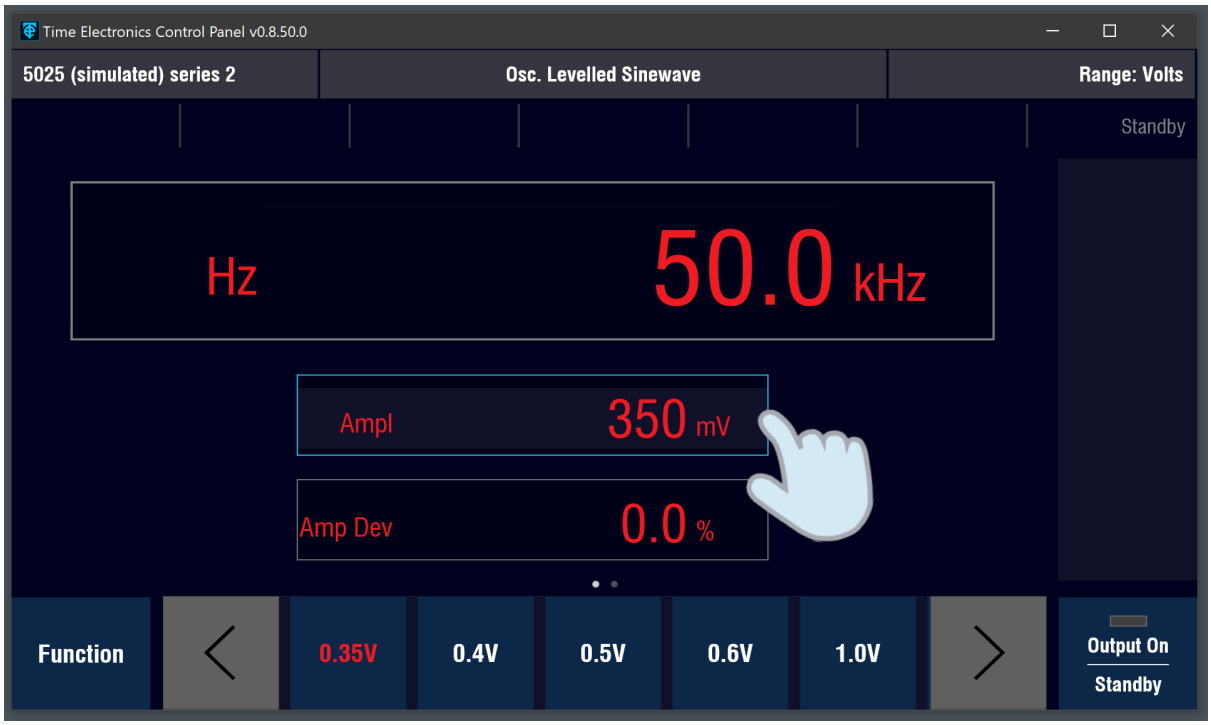

You can adjust and deviate the duty cycle % value as required.

To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display box will fade, and selection is possible. To exit, press **Function** again.

### 3.15.6 Levelled Sinewave

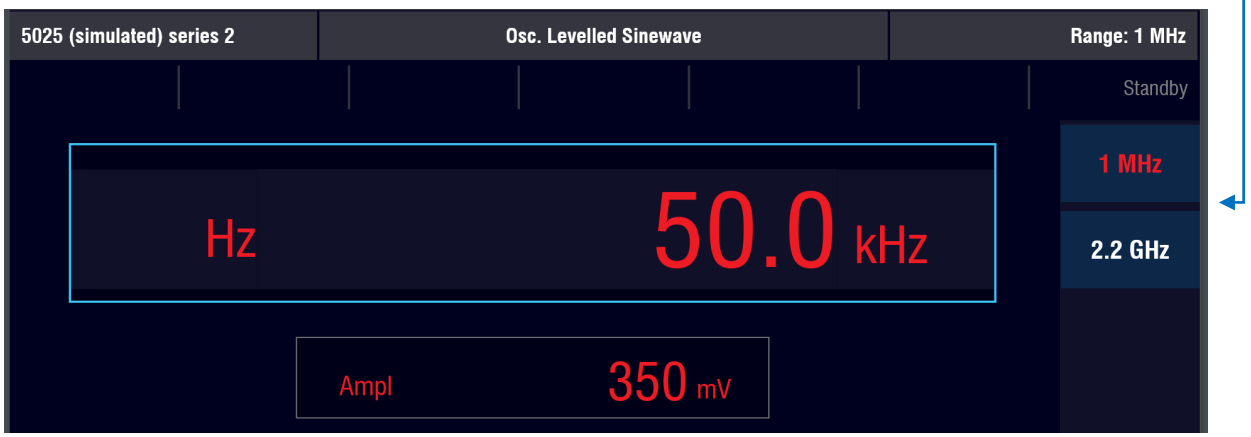
Select by pressing the **Levelled Sinewave** button:


To set the amplitude, press the **Ampl** box and select from the voltages in the bottom menu:




The amplitude can also be deviated by pressing the **Amp Dev** box and entering a value. The adjust method can also be used.

By default the application will set to 1 MHz. This can be changed by pressing the **Range** button. The sidebar menu will display the available ranges:




To close the Range sidebar menu, press the **Range** button.

The **Units** button opens a sidebar menu that allows you to change the units as required:


To close the Units sidebar menu, press the **Units** button.

## Setting an Output Value

Setting the output value is the same method as the DCI and ACI functions. See section 3.2 and 3.4 for detailed instructions of these setting methods.

1. Keyboard Entry
2. On-screen Keyboard Entry
3. Adjust Method

Deviation can also be used on this function.

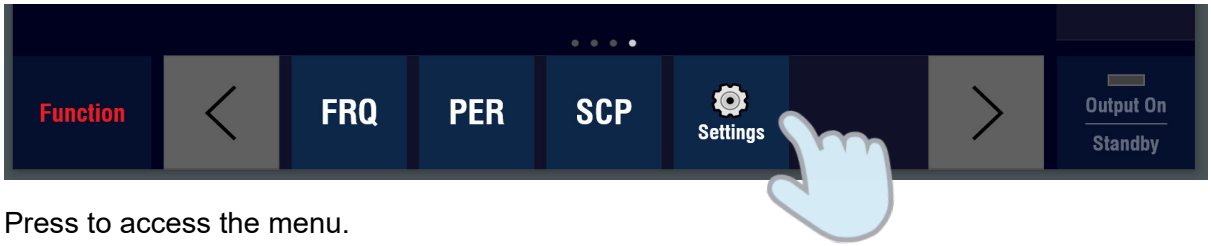
To go back to the Scope Calibration Option menu, press the **Function** button. The output setting display will fade, and selection is possible. To exit, press **Function** again.

### 3.15.7 Fast Rise

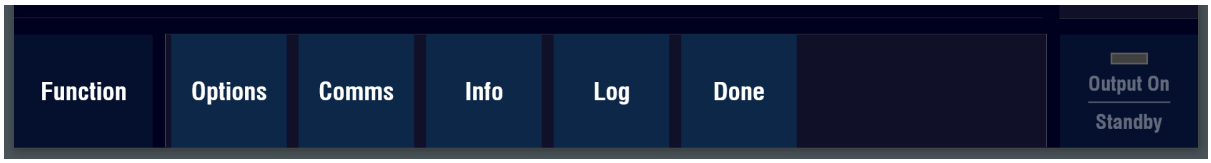
Select by pressing the **Fast Rise** button:

# 4 Settings

The **Settings** button is situated in the functions menu at the end:




Press to access the menu.

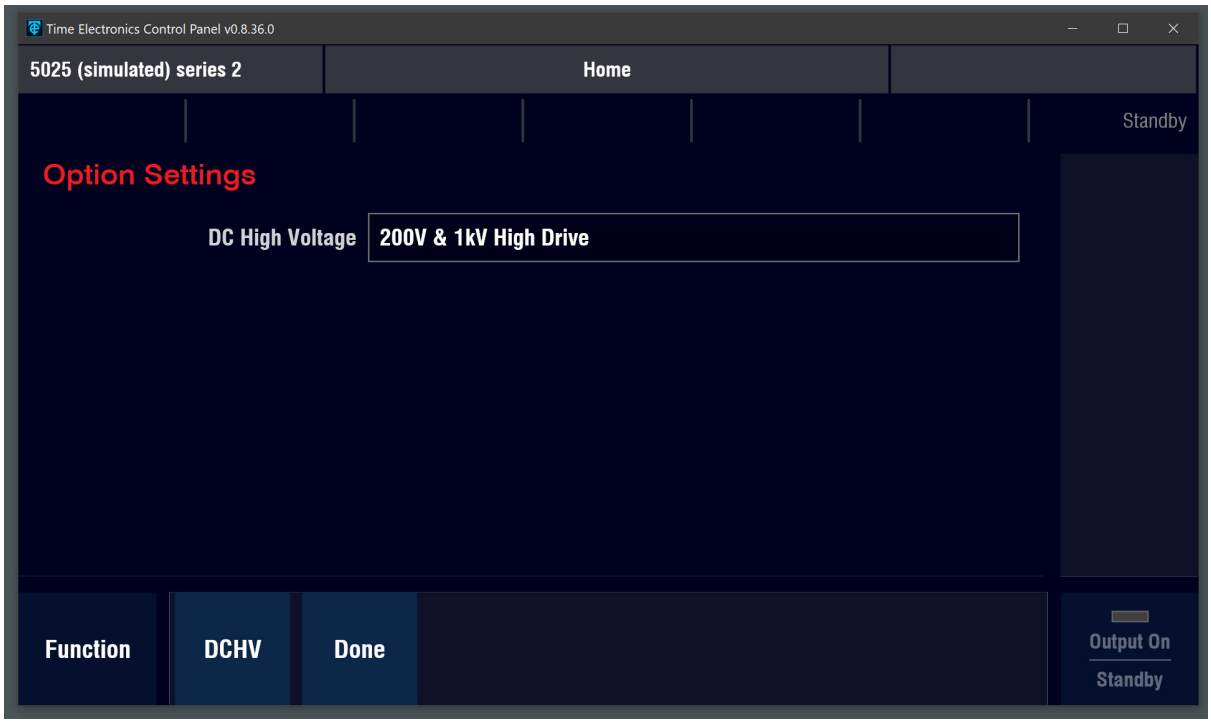



The **Done** button is used to step back a menu level at any time within the settings screens.

### Options

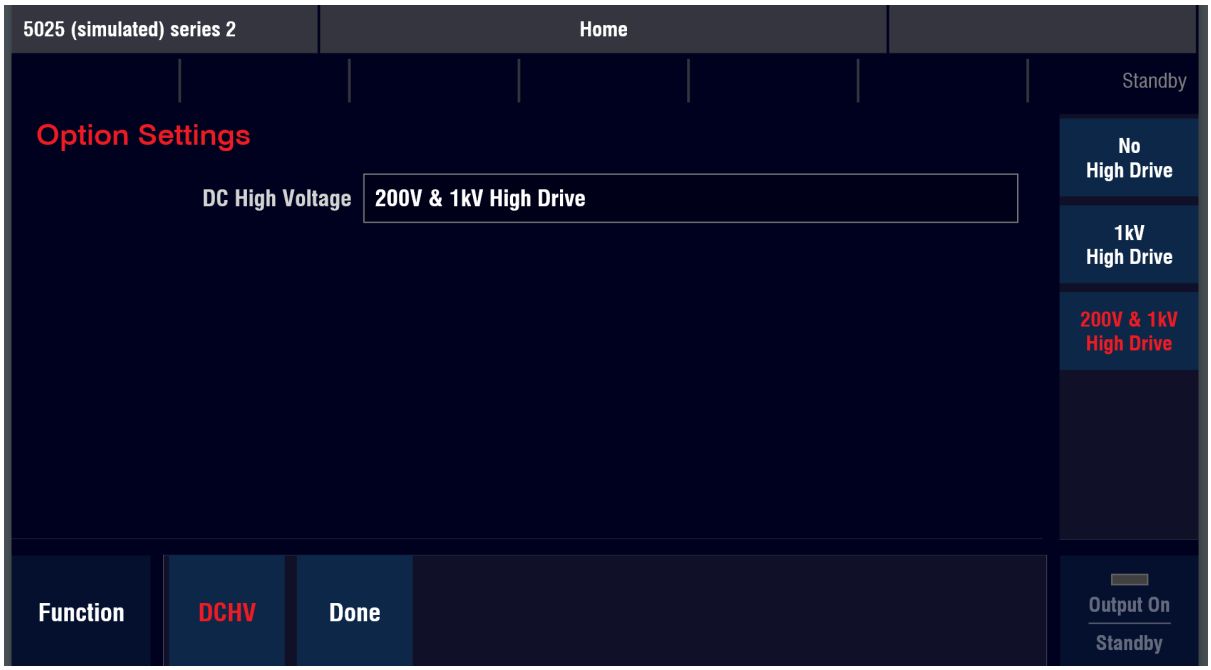
This screen will display the calibrator options that can be set. The 5025-S2 models have an optional DC High Drive setting that can be set for required use.

After pressing the options button, the screen appears:




The high drive modes provides a higher output current to power more demanding instruments such as analogue meters or voltage detectors.

Press the DCHV button to open the sidebar menu with available settings:




When the High Drive option is set, the display will indicate it is in use at the top right of the screen. The High Drive ranges will also be available in the Range selection menu:


**Additional settings are:**

**Comms:** Check and select the communication settings required.

**Info:** View the calibrator details, options fitted, firmware versions etc.

**Log:** View the log records of recent commands in the application.

**Done:** Exit settings.

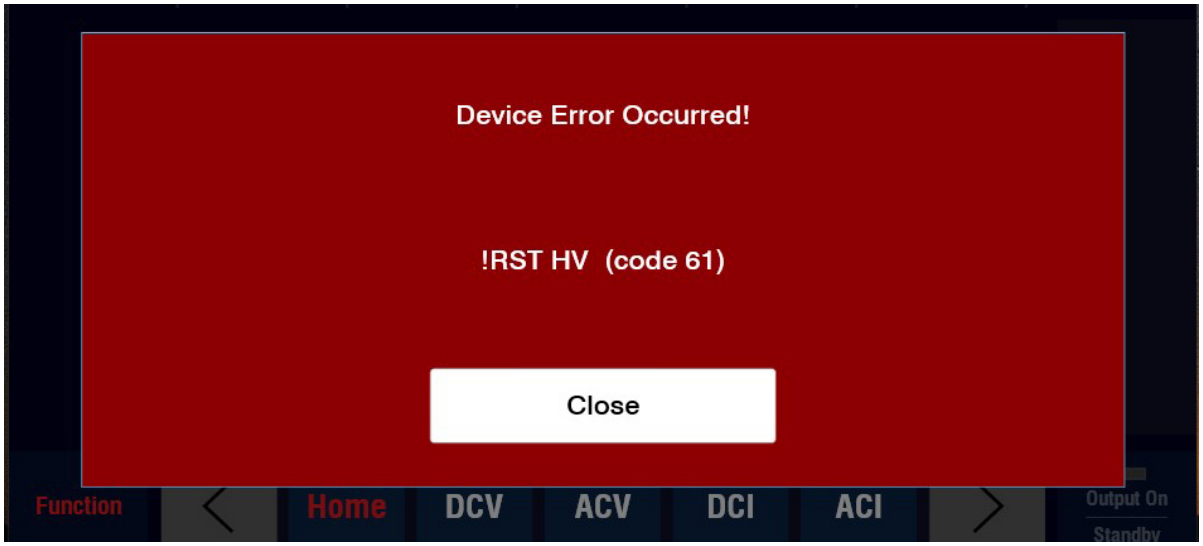
# 5 Errors and Fault Diagnosis

The control interface will detect and display errors from the calibrator. These errors are displayed on the calibrator front panel as well.

**NOTE:** When an error displays, please look up the code in the calibrator user manual for information and guidance on how to proceed.

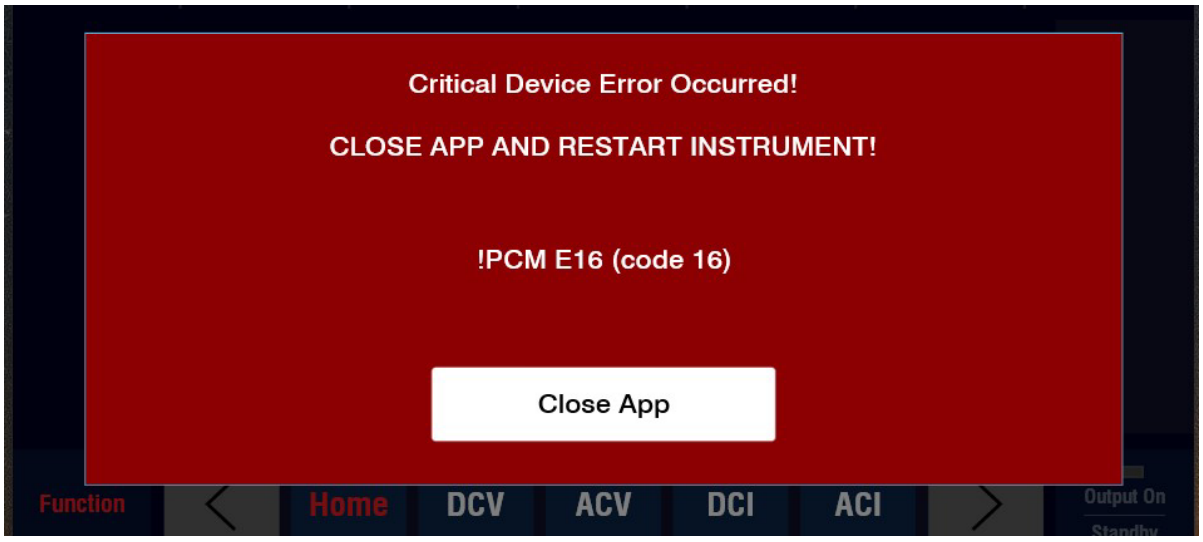
### Recoverable Error Notifications

These are displayed in a pop-up window and notify you of the error and code.
The window can be closed and the application can continue to be used.




### Non-Recoverable Error Notifications

These are displayed in a pop-up window and notify you of the error and code.
The control application must be closed when this type of error appears.



# 6 Contacting Time Electronics

**Online:**
Please visit **www.timeelectronics.com** and select Support Request from the Contact links. From this page you will be able to send information to the Time Electronics service team who will help and support you.

**By phone:**
+44 (0) 1732 355992

**By email:**
mail@timeelectronics.co.uk

**UK Factory Address**
Time Electronics Ltd
Unit 5, TON Business Park, 2-8 Morley Road,
Tonbridge, Kent, TN9 1RA.
United Kingdom.