Fluke Calibration 525B
Temperature/Pressure Calibrator
Quick Reference Guide

Selecting units

Press:

| VOLTS / mA | Or | TC / RTD | Or | ⏦ |

Volts   TC   Pressure

mA   RTD
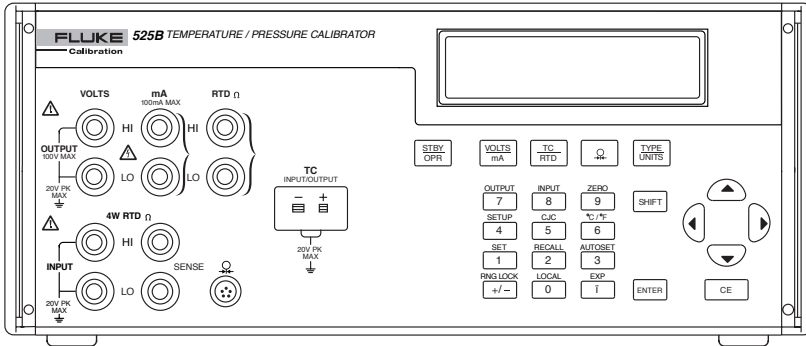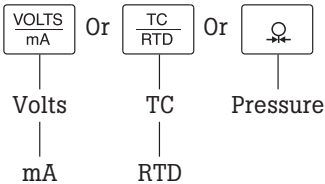
Selecting input/output *(Measure/Source)*

(Volts, mA are source only, pressure is measure only)

| SHIFT | Or | OUTPUT 7 | Or | INPUT 8 |

Changing pressure units/probe type

Selected – RTD   **Selected – TC**   **Selected – Pressure**

TYPE UNITS	TYPE UNITS	TYPE UNITS
PT 500–385	L	Kg/cm^2
PT 1K–385	N	PSI
PT 100–392	R	in H$_2$O 4 °C
PT 100–JIS	S	in H$_2$O 20 °C
Ni 120	T	cm H$_2$O 4 °C
Cu 10	U	cm H$_2$O 20 °C
YSI–400	mV/C°	bar
400Ω	B	mbar
4 KΩ	C	K Pa
SPRT 25Ω	E	in H$_g$ 0 °C
User-Def	J	mm H$_g$ 0 °C
	K	

Sourcing *(Output)*

STBY OPR	

For Volts, mA and RTD
(All others are active when selected)

Setting setpoints *(Output only; example is for TC)*
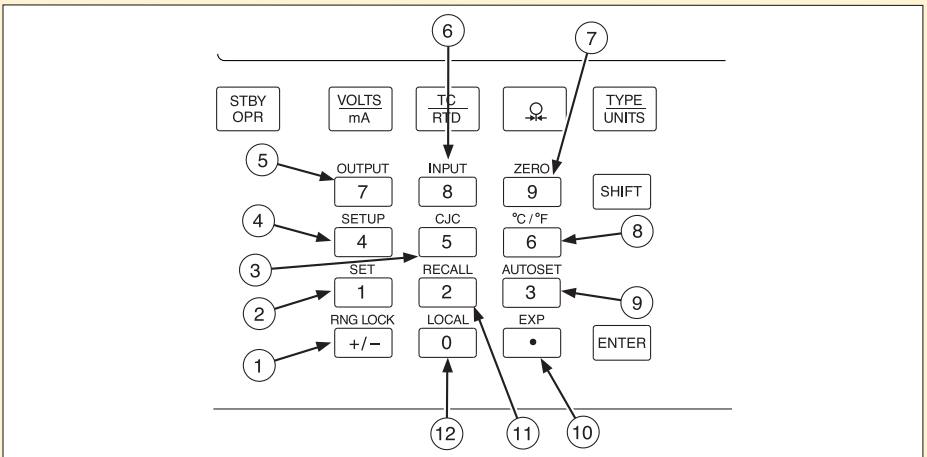
• **Select desired output type.**

• **Enter setpoint value** | 1 | 2 | 3 | • | 4 | | ENTER |

Then:

SHIFT

SET
1

├─ **Press # of setpoint (1–9).**

➜ **Repeat up to nine times.**

Calibrator function keys reference

No	Name	Description
①	**RNG LOCK** +/−	Activates/deactivates the autorange feature of the calibrator in voltage source modes.
②	**SET** 1	Used to program a setpoint step for any output mode. Key in the desired output and press SHIFT 1 . SETPOINT # appears on the display. Select a setpoint number from 1 to 9. The output you entered can now be recalled or used in the AUTOSET key described later in this manual. Each TC type, each RTD/OHMS type, mA, and volts each have 9 programmable setpoints.
③	**CJC** 5	Toggles between the internal and external cold junction reference locations.
④	**SETUP** 4	Press ENTER to scroll through the LCD backlight, interface, and address menus. • Use ⬆ and ⬇ to adjust LCD backlight when the LCD menu is displayed. • Use ⬆ and ⬇ to toggle between serial and GPIB interface when the Interface menu is displayed. • Use ⬆ and ⬇ to scroll from address:1 to address 30 when the address menu is displayed.

Recalling setpoints

| SHIFT |

| RECALL |
| 2 |

└─ Press # of setpoint to recall (1-9).

Repeat for ALL setpoints desired.

AutoSet *(Automatic timed setpoint)*

Uses setpoints already programmed.

| SHIFT |

| AUTOSET |
| 3 |

├─ Press # of setpoints to use as auto setpoints (1-9).

└─ Press # of seconds to pause and hold setpoints (dwell time) (5-500 sec) | ENTER |

Setpoints cycle starting at setpoint #1 through # of setpoints selected.

Then cycle down to #1 – Repeats until any button on panel is pressed.

No	Name	Description
5	OUTPUT 7	Selects output mode.
6	INPUT 8	Selects input mode.
7	ZERO 9	Zeros the pressure module reading when in pressure measurement mode. Zeros the thermocouple TC mV/°C offset when in TC measurement mode.
8	C°/F° 6	Toggles between centigrade and Fahrenheit when you are using the TC or RTD functions.
9	AUTOSET 3	AUTOSET runs through the setpoints you entered using the SET function. Press \[SHIFT\] \[3\]. AUTO SET POINT? appears on the display. Enter a number between 1 and 9 that corresponds to the number of setpoints being used. DWELL TIME 5–500? appears on the display. Dwell time is the number of seconds between each setpoint. The output cycles through each setpoint and then reverses the order. For example, if 5 is entered for the number of setpoints, the Calibrator cycles through setpoints 1, 2, 3, 4, 5 and then reverses to setpoints 4, 3, 2, and 1. ⚠ **Caution** **Setpoints of 30 V or greater will not go to standby when you use this feature.**
10	EXP •	Used to enter an exponent when you define a custom RTD.
11	RECALL 2	Used to recall a programmed set point. Press \[SHIFT\] \[2\]. RECALL SPT # appears on the display. Enter the number of the output setpoint that you want to use. The output will then be programmed to the setpoint you entered.
12	LOCAL 0	Used to regain local control of the calibrator. If you set the calibrator to a remote state using the remote commands, all the front panel keys are locked out except the Local key. When you press the Local key, the front panel is unlocked. *Note* *This function does not work when you set the Calibrator using the Remote with Lockout command. In Remote with Lockout mode, ALL keys are locked out and the Local key will not unlock the front panel.*

User-defined RTD

(Uses Callendar–Van Dusen constants A, B, C)

• **Select RTD** [TC / RTD]

• **Scroll to USR_DEF** [TYPE / UNITS] [ENTER]

  • **Select memory # (1–5) to store or recall constants.**

  • **Select** [SET / 1] **Or** [RECALL / 2]

  • **ENTER minimum temperature from calibration certificate (i.e. –220 °C)** [ENTER]

  • **ENTER maximum temperature from calibration certificate** [ENTER]

  • **ENTER R_0 (or adjusted value from R_{TPW})** [ENTER]

  • **ENTER coefficient A, B, C from calibration certificate (default is for PT100–385, 0–620 °C).**

    [ENTER] **after each coefficient. Use** [EXP / •] **and** [RNG LOCK / +/–] **when needed.**

To recall user–defined values for source or measure:

  • **Select RTD_USER_DEF** [ENTER]

  • **Select memory # (1–5) of RTD to be used.**

  • **Select** [RECALL / 2]

  • [SHIFT] **Or** [SHIFT]

    [OUTPUT / 7]   [INPUT / 8]

    [STBY / OPR]

  • [ENTER]

Fluke Calibration. *Precision, performance, confidence.*™

Electrical	RF	Temperature	Pressure	Flow	Software