

# 1551A Ex/1552A Ex

## SCPI Commands

### *Instruction Sheet*

### ***Introduction***

This Instruction Sheet explains the 1551A Ex/1552A Ex (Product) remote SCPI commands.

### ***Remote Communications***

#### ***RS-232 Port Operation***

The RS-232 configuration is fixed as follows:

- 8 data bits
- 1 stop bit
- no parity
- Xon/Xoff flow control
- End of line is CR (ASCII 13)

The baud rate is 9600 by default but may be changed to 2400.

#### ***Command Summary***

Commands that allow a setting to be set usually have a query form ending with a question mark. For example:

UNIT:TEMP C     Sets the unit to degrees Celsius.

UNIT:TEMP?     Returns the unit of measurement.

See Table 1 for an alphabetical list of all SCPI Commands.

**Table 1. List of All Commands**

| Command                              | Command Explanation  |
|--------------------------------------|--|
| *IDN?                                | Returns the instrument identification string that indicates the manufacturer, model number, serial number, and code firmware version.  |
| CAL:DEV:DATE<br><year>,<month>,<day> | Sets the last calibration date for the device. The <year> parameter is a four-digit number, 2000 to 2099. The <month> parameter is a one or two-digit number, 1 to 12. The <day> parameter is a one or two-digit number, 1 to 31. This command is password protected.  |
| CAL:DEV:SI  ON OFF                   | Sets the SI units lock. The parameter is either OFF or ON. This command is password protected.   |
| CAL:USER:ADJ<n>  <value>             | Sets the adjustment at one of the calibration temperature points for a manual calibration. Number <n> specifies the low-temperature calibration point (1), mid-range calibration point (2), or high-temperature calibration point (3). The parameter <value> is the temperature adjustment in degrees Celsius. This command is password protected.   |
| CAL:USER:LOW  <temp>                 | Automatically calibrates the low range of the Product. The probe temperature must be held at a constant, known temperature near the low end of the range. The <temp> value is the temperature in degrees Celsius or Fahrenheit that the Product should be displaying after it is calibrated. This command is password protected. The Product temperature units must match the units of the <temp> value.   |
| CAL:USER:HIGH  <temp>                | Automatically calibrates the high range of the product. The probe temperature must be held at a constant, known temperature in degrees Celsius or Fahrenheit near the high end of the range. The <temp> value is the temperature that the Product should be displaying after it is calibrated. This command is password protected. The Product temperature units must match the units of the <temp> value. |
| CAL:USER:TEMP<n>  <temp>             | Sets one of the calibration temperature points for a manual calibration. Number <n> specifies the low-temperature calibration point (1), mid-range calibration point (2), or high-temperature calibration point (3). The parameter <temp> is the temperature of the calibration point in degrees Celsius. This command is password protected.  |
| CAL:USER:ZERO  <temp>                | Automatically calibrates the center of the range of the product. The probe temperature must be held at a constant, known temperature near 0 °C. The <temp> value is the temperature in degrees Celsius or Fahrenheit that the Product should be displaying after it is calibrated. This command is password protected. The Product temperature units must match the units of the <temp> value.             |
| CALC:AVER:CLE                        | Resets the minimum and maximum to the present reading, and clears the stability trend history.   |
| CALC:AVER<n>:DATA?                   | Returns the value of a statistical calculation. The AVER suffix, <n>, specifies the calculation type as follows:<br><br>1  Maximum<br>2  Minimum<br>3  Trend<br><br>Maximum is returned if no suffix number is given.  |

| Command               | Reaction   |
|-----------------------|--|
| CALC:CONV:TEST? <res> | Returns the calculated temperature in Celsius for the given sensor reading, or "0.0,OL" if the result is out of range. The parameter <res> is the sensor reading in ohms.  |
| FETC?                 | Returns the last measurement in units according to the UNIT:TEMP setting. If there is no valid measurement available the response is "0.0,OL".   |
| SENS:DATA:OHMS?       | Returns the present ohms reading. The response is expressed in ohms. If there is no valid measurement available the response is "0.0,OL".  |
| STAT:MEAS?            | Reads and clears the Measurement Event Register, indicating whether a new measurement is available to be read. Returns "1" if a new measurement has occurred since the previous command, and "0" otherwise.  |
| SYST:ERR?             | Returns a system error message if any are present in the system error queue. Otherwise it returns "0,"No error".   |
| SYST:PASS:CDIS        | Disables access to password-protected commands.  |
| SYST:PASS:CEN <pass>  | Enables access to password-protected commands. The <pass> parameter is the current password. The original password is "1234".  |
| SYST:PASS:CEN:STAT?   | Returns the present state of password protection. The response is "1" if access to password-protected settings is allowed, or "0" if they are locked. Access is always disabled after the power is switched off.   |
| SYST:PASS:NEW <pass>  | Sets new password. The <pass> parameter is the new password. It can be up to 10 characters in length and can include any upper or lower case letters, numeric digits, and the underscore('_'). Lower case letters are automatically converted to upper case upon receipt and returned as upper case in any related query commands. <b>IMPORTANT: Do not forget the password.</b> |
| UNIT:TEMP <unit>      | Sets the temperature unit to degrees Celsius or Fahrenheit. The <unit> parameter is C for Celsius or F for Fahrenheit. If the SI unit lock is ON, only Celsius is allowed.   |

